

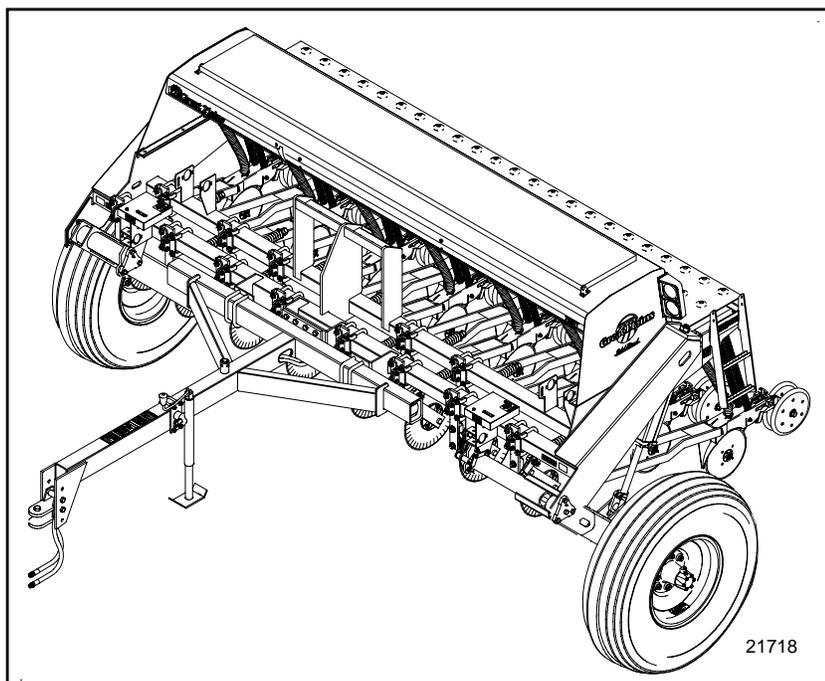
# Operator's Manual

706/1006NT  
End-Wheel, No-Till Drill

 **Great Plains**  
Manufacturing, Inc.  
[www.greatplainsmfg.com](http://www.greatplainsmfg.com)



*Read the operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!*



*Cover illustration may show optional equipment not supplied with standard unit.*



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## Important Safety Information

### Look for Safety Symbol

The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.



### Be Aware of Signal Words

Signal words designate a degree or level of hazard seriousness.

**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.



**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

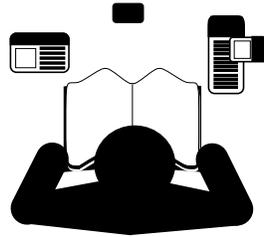


**CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



## Be Familiar with Safety Decals

- ▲ Read and understand “Safety Decals,” page 7, thoroughly.
- ▲ Read all instructions noted on the decals.



## Keep Riders Off Machinery

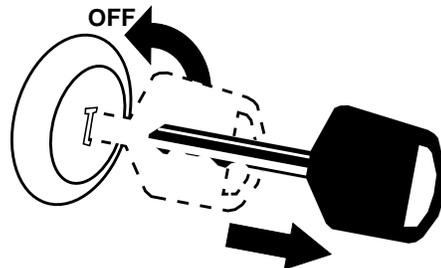
Riders obstruct the operator's view. Riders could be struck by foreign objects or thrown from the machine.

- ▲ Never allow children to operate equipment.
- ▲ Keep all bystanders away from machine during operation.



## Shutdown and Storage

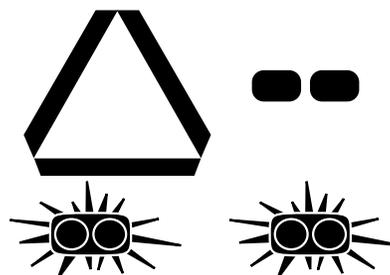
- ▲ Lower drill, put tractor in park, turn off engine, and remove the key.
- ▲ Secure drill using blocks and supports provided.
- ▲ Detach and store drill in an area where children normally do not play.



## Use Safety Lights and Devices

Slow-moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.

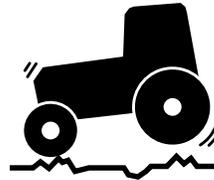
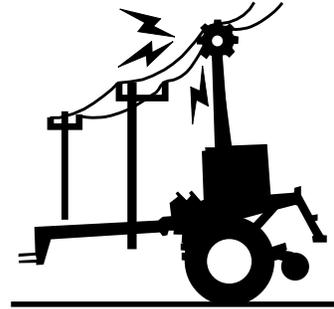
- ▲ Use flashing warning lights and turn signals whenever driving on public roads.
- ▲ Use lights and devices provided with implement.



## Transport Machinery Safely

Maximum transport speed for implement is 20 mph. Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

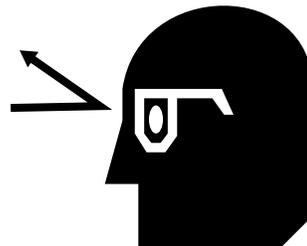
- ▲ Do not exceed 20 mph. Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.
- ▲ Comply with state and local laws.
- ▲ Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.
- ▲ Carry reflectors or flags to mark drill in case of breakdown on the road.
- ▲ Keep clear of overhead power lines and other obstructions when transporting.



## Avoid High Pressure Fluids

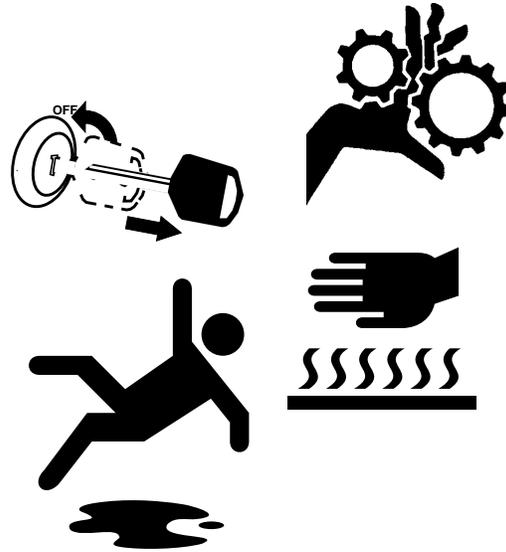
Escaping fluid under pressure can penetrate the skin, causing serious injury.

- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines.
- ▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



## Practice Safe Maintenance

- ▲ Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.
- ▲ Work in a clean, dry area.
- ▲ Lower the drill, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Make sure all moving parts have stopped and all system pressure is relieved.
- ▲ Allow drill to cool completely.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on sprayer.
- ▲ Inspect all parts. Make sure parts are in good condition and installed properly.
- ▲ Remove buildup of grease, oil or debris.
- ▲ Remove all tools and unused parts from drill before operation.



## Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.



## Wear Protective Equipment

- ▲ Wear protective clothing and equipment.
- ▲ Wear clothing and equipment appropriate for the job. Avoid loose-fitting clothing.
- ▲ Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Because operating equipment safely requires your full attention, avoid wearing radio headphones while operating machinery.



## Handle Chemicals Properly

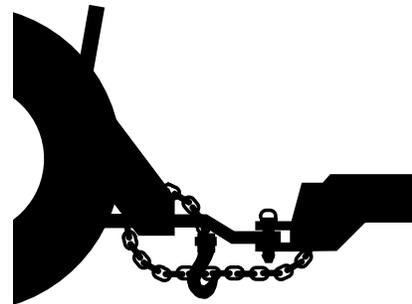
Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.

- ▲ Read and follow chemical manufacturer's instructions.
- ▲ Wear protective clothing.
- ▲ Handle all chemicals with care.
- ▲ Avoid inhaling smoke from any type of chemical fire.
- ▲ Store or dispose of unused chemicals as specified by chemical manufacturer.



## Use A Safety Chain

- ▲ Use a safety chain to help control drawn machinery should it separate from tractor drawbar.
- ▲ Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
- ▲ Attach chain to tractor drawbar support or other specified anchor location. Allow only enough slack in chain to permit turning.
- ▲ Replace chain if any links or end fittings are broken, stretched or damaged.
- ▲ Do not use safety chain for towing.



## Tire Safety

Tire changing can be dangerous and should be performed by trained personnel using correct tools and equipment.

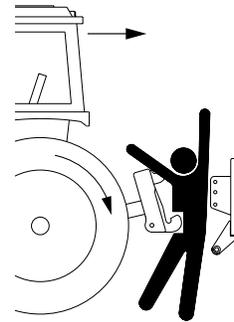
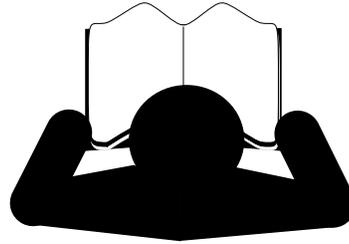
- ▲ When inflating tires, use a clip-on chuck and extension hose long enough to you to stand to one side—not in front of or over tire assembly. Use a safety cage if available.
- ▲ When removing and installing wheels, use wheel-handling equipment adequate for weight involved.



## Safety at All Times

Thoroughly read and understand the instructions in this manual before operation. Read all instructions noted on the safety decals.

- ▲ Be familiar with all drill functions.
- ▲ Operate machinery from the driver's seat only.
- ▲ Do not leave drill unattended with tractor engine running.
- ▲ Do not dismount a moving tractor. Dismounting a moving tractor could cause serious injury or death.
- ▲ Do not stand between the tractor and drill during hitching.
- ▲ Keep hands, feet and clothing away from power-driven parts.
- ▲ Wear snug-fitting clothing to avoid entanglement with moving parts.
- ▲ Watch out for wires, trees, etc., raising drill. Make sure all persons are clear of working area.
- ▲ Do not turn tractor too tightly, causing drill to ride up on wheels. This could cause personal injury or equipment damage.



## Safety Decals

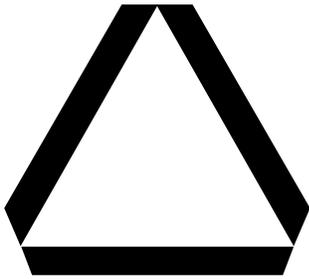
Your implement comes equipped with all safety decals in place. They were designed to help you safely operate your implement.

- ▲ Read and follow decal directions.
- ▲ Keep all safety decals clean and legible.
- ▲ Replace all damaged or missing decals. Order new decals from your Great Plains dealer. Refer to this section for proper decal placement.

▲ When ordering new parts or components, also request corresponding safety decals.

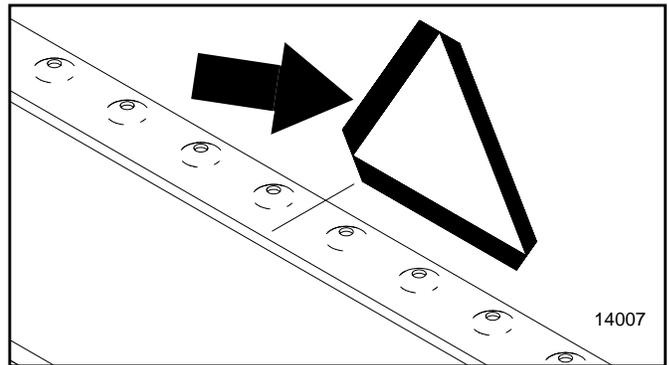
▲ To install new decals:

1. Clean the area on which the decal is to be placed.
2. Peel backing from decal. Press firmly on surface, being careful not to cause air bubbles under decal.



**818-055C**

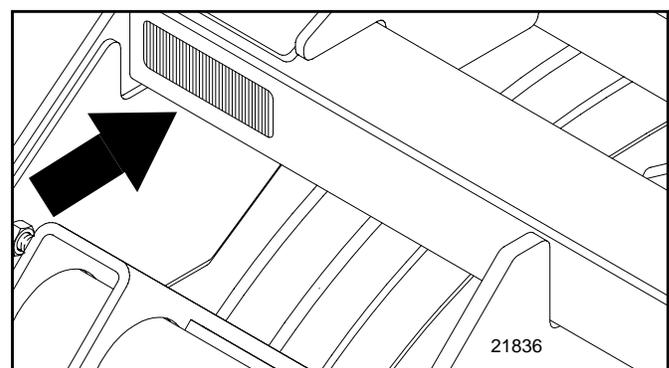
Slow Moving Vehicle Label



**838-265C**

Amber Reflectors

Reflector located on both ends; 4 reflectors total

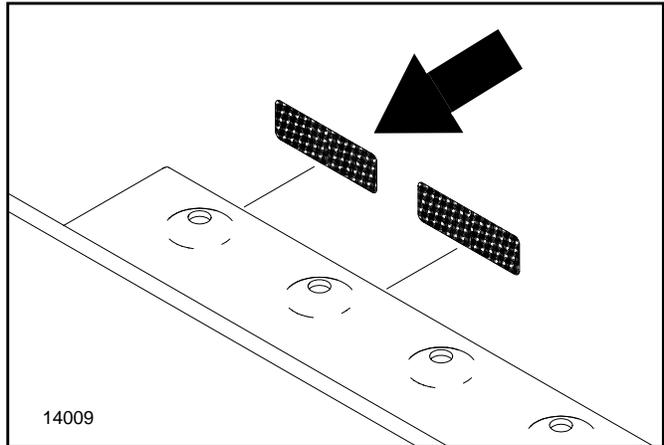




**838-266C**

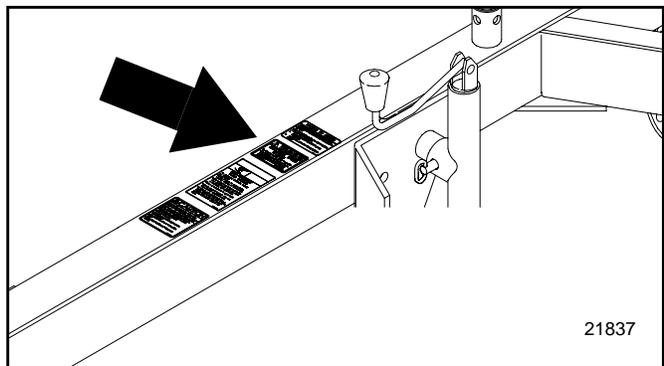
Red Reflectors

Reflector located on both ends; 2 reflectors total



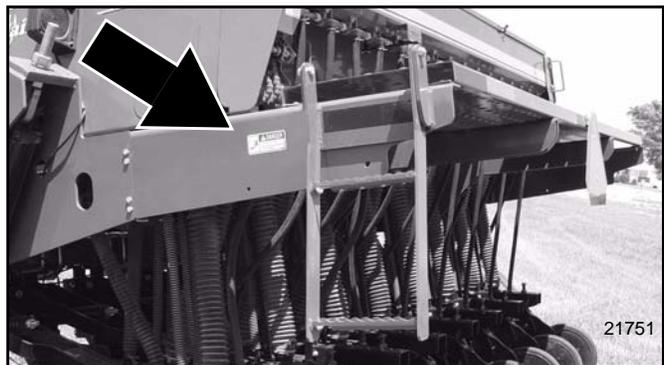
**818-337C**

Excessive Speed Hazard



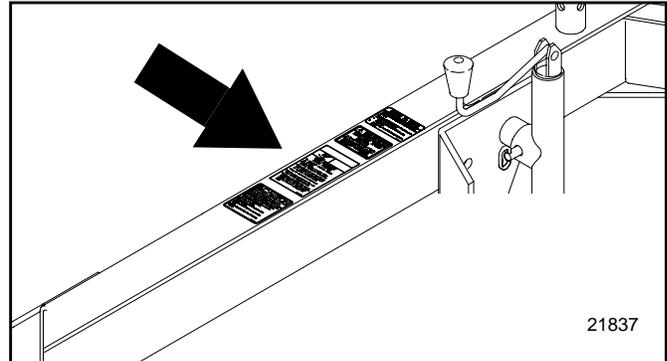
**838-102C**

Falling Hazard





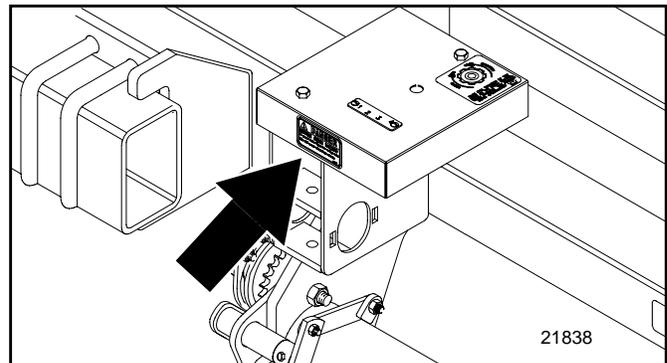
**818-437C**  
High Pressure Hazard



21837



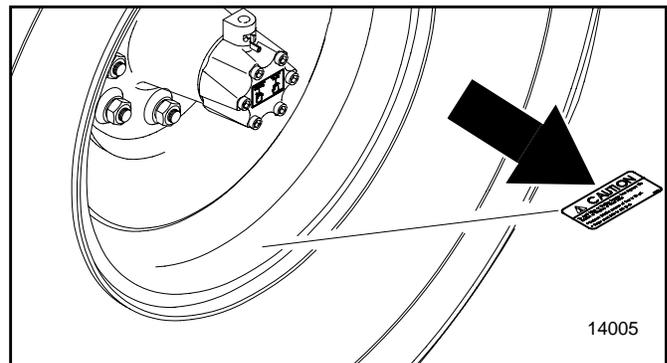
**818-518C**  
Moving Chain Hazard  
Also found on Small Seeds Attachment, Native Grass



21838



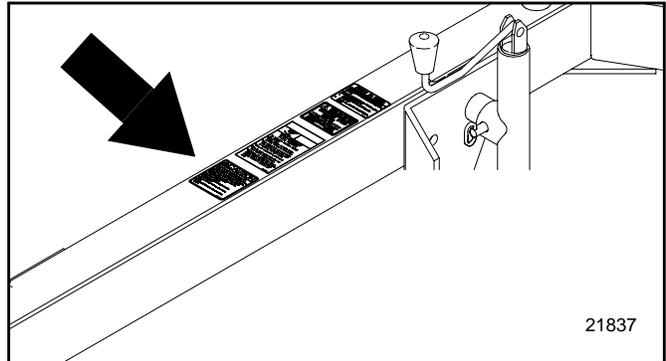
**838-556C**  
High Pressure Hazard



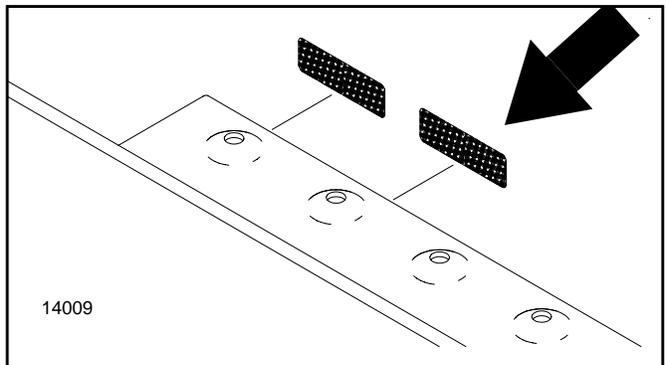
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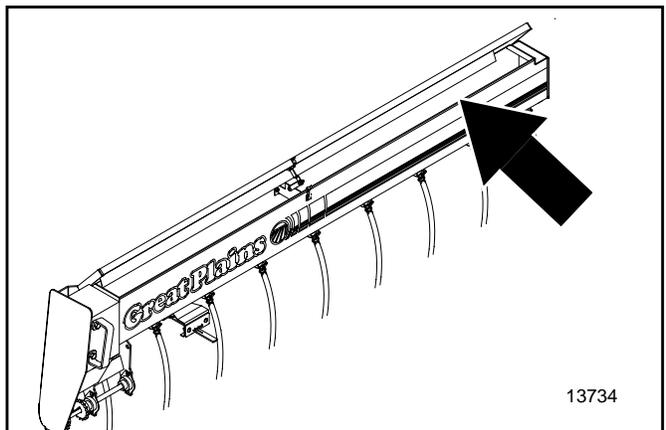
**818-587C**  
General Instructions



**838-267C**  
Daytime Reflector  
Reflector located on both ends; 2 reflectors total



**838-467C**  
Decal Underside of Lid, Small Seeds Box

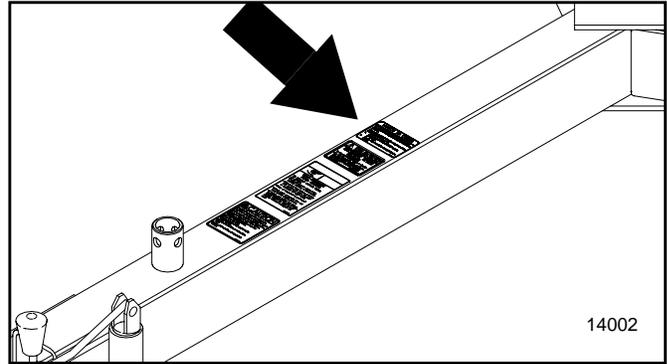


**CAUTION**

To prevent injury or death:

- Read and understand Operator's Manual before using.
- Lower implement, stop tractor engine, set park brake and remove ignition key before servicing, adjusting, repairing or unplugging.
- Do not allow riders.
- Keep others away during operation.
- Safely support and secure implement before repairs are made. 818-719C

**818-719C**  
General Instructions



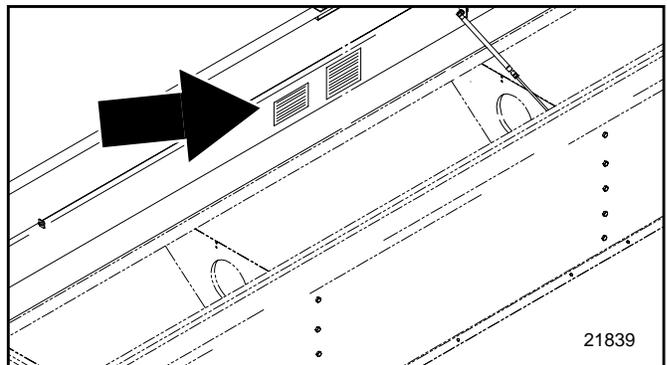
**IMPORTANT!**

To prevent damage to the Native Grass box agitator and its drive components:

Do not transport drill with Native Grass box loaded with seed.

838-428C

**838-428C**  
Important to prevent damage



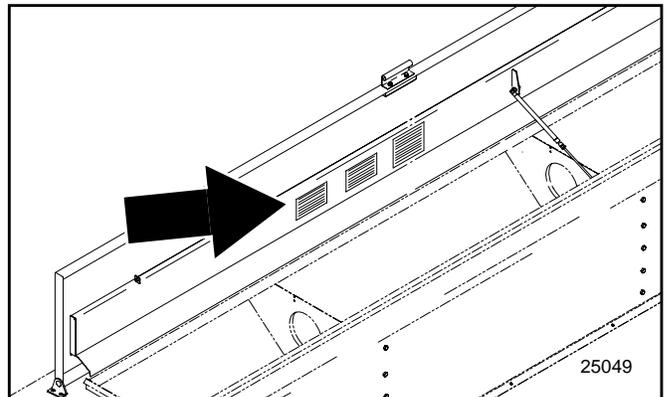
**WARNING**

**CRUSHING HAZARD**

To prevent serious injury, stay clear of moving parts.

17

**838-611C**  
Hand Crushing Hazard



**IMPORTANT!**

FOR NATIVE GRASS MIX ONLY

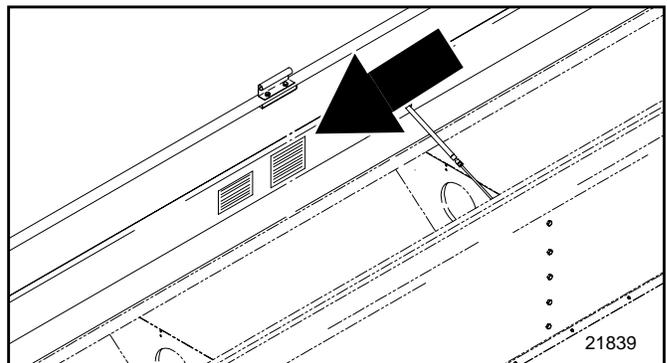
Powdered graphite must be mixed with the native grass seed mix for proper seed flow and metering.

Recommended usage:  
Sprinkle 1/3 cup of graphite per 6 ft. of seed box on top of the native grass seed mix.

For humid planting environments, double or triple rate as needed.

838-634C

**838-634C**  
Important for native grass mix only





## Introduction

Great Plains welcomes you to its growing family of new product owners. This drill has been designed with care and built by skilled workers using quality materials. Proper setup, maintenance and safe operating practices will help you get years of satisfactory use from the machine.

### Description of Unit

The 706/1006NT Drill is a grain drill of end wheel design which couples Great Plains spring mounted coulter with a straight arm design of our solid stand opener to achieve no-till drilling capabilities. The end wheel design keeps the ground-working components in line with the end wheels for accurate coulter depth and seed placement over uneven terrain and allows the unit to follow field curves without side-loading the openers.

### Intended Usage

This machine is intended to be used primarily for No-Till drilling. It can easily be adapted for conventional drilling applications.

### Models Covered

706/1006NT

### Using This Manual

This manual will familiarize you with safety, assembly, operation, adjustments, troubleshooting and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The information in this manual is current at printing. Some parts may change to assure top performance.

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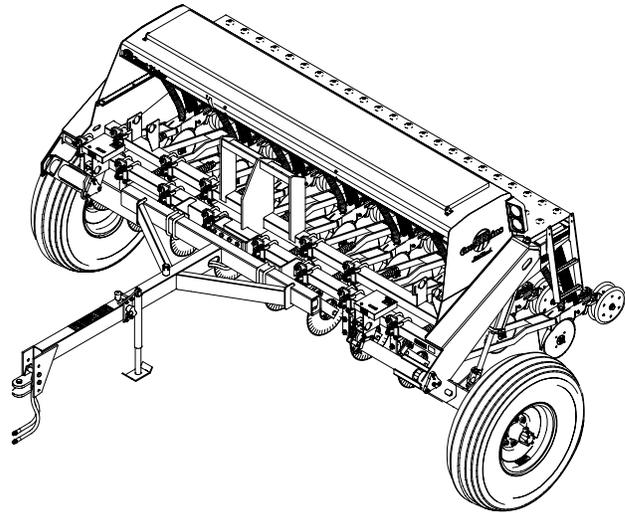
**IMPORTANT! Refer to 706/1006NT End-Wheel, No-Till Drill seed rate book for seed rate charts, calibration instructions, and setting seed rate instructions.**

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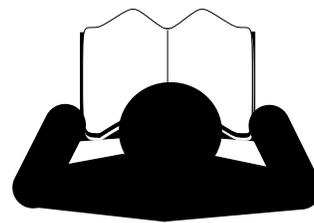
### Definitions

The following terms are used throughout this manual.

Right-hand and left-hand as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated.



21718




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**IMPORTANT:** A crucial point of information related to the preceding topic. For safe and correct operation, read and follow the directions provided before continuing.

---

**NOTE:** Useful information related to the preceding topic.

## Owner Assistance

If you need customer service or repair parts, contact a Great Plains dealer. They have trained personnel, repair parts and equipment specially designed for Great Plains products.

### *Refer to Figure 1*

Your machine's parts were specially designed and should only be replaced with Great Plains parts. Always use the serial and model number when ordering parts from your Great Plains dealer. The serial-number plate is located as shown.

Record your drill model and serial number here for quick reference:

Model Number: \_\_\_\_\_

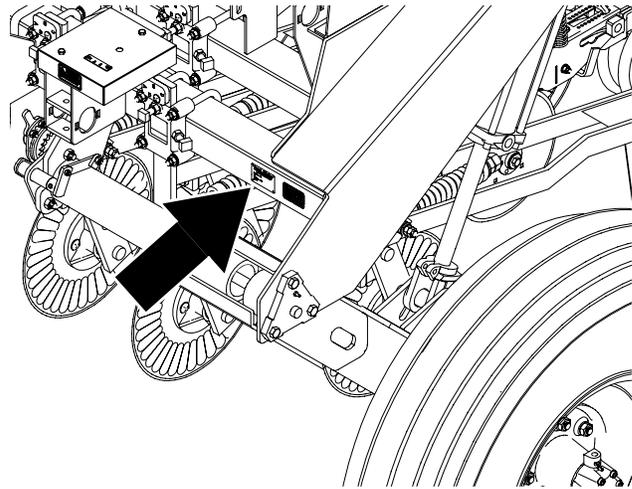
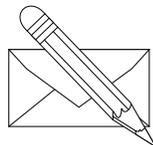
Serial Number: \_\_\_\_\_

Your Great Plains dealer wants you to be satisfied with your new machine. If you do not understand any part of this manual or are not satisfied with the service received, please take the following actions.

1. Discuss the matter with your dealership service manager. Make sure they are aware of any problems so they can assist you.
2. If you are still unsatisfied, seek out the owner or general manager of the dealership.
3. For further assistance write to:

### **Product Support**

**Great Plains Mfg. Inc., Service Department**  
PO Box 5060  
Salina, KS 67402-5060



**Figure 1**  
**Serial Number Plate**

14566

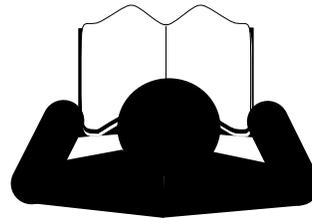


## Preparation and Setup

This section will help you prepare your tractor and drill for use. Before going to the field, you must hitch a tractor to the drill, hook up hydraulics and check that hydraulics have been bled.

### Prestart Checklist

1. Read and understand "Important Safety Information," page 1.
2. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
3. Check that all grease fittings are in place and lubricated. Refer to "Lubrication," page 33.
4. Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See "Safety Decals," page 7.
5. Inflate tires to pressure recommended and tighten wheel bolts as specified. See "Appendix," page 41.



### Hitching Tractor to Drill



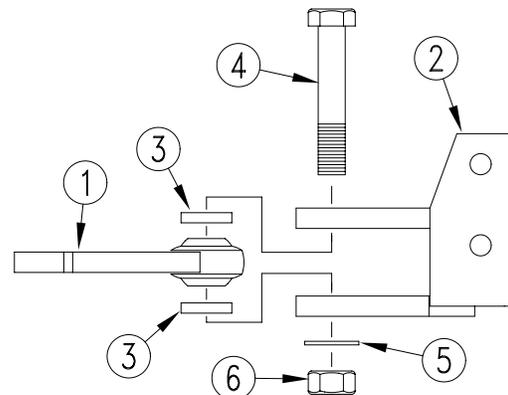
#### **DANGER**

*You may be severely injured or killed by being crushed between the tractor and drill. Do not stand or place any part of your body between drill and moving tractor. Stop tractor engine and set park brake before installing the hitch pin.*

#### Hitch Assembly

Refer to Figure 2

1. Insert upper hitch plate (1) into clevis hitch (2) with a spacer tube (3) on each side of ball swivel.
2. Bolt in place with 1 x 5 1/2 inch bolt (4), flat washer (5) and nylock nut (6).



**Figure 2**  
Hitch Assembly

13939

## Hitch Height

Refer to Figure 3

1. For proper field operation, drill tongue should run level in field position.
  - a. With drill in field position, adjust tongue jack to level tongue.
  - b. Measure tractor drawbar height to determine proper hitch height on drill.
  - c. Attach hitch to tongue with two 3/4 x 6 inch bolts (1), lock washers (2) and nuts (3).

NOTE: Mounting holes in drill hitch are offset so hitch can be turned over and attached in three different positions, giving six different hitch heights.

NOTE: When hitching drill to a different tractor, check for a difference in drawbar heights. If heights are different, readjust accordingly.

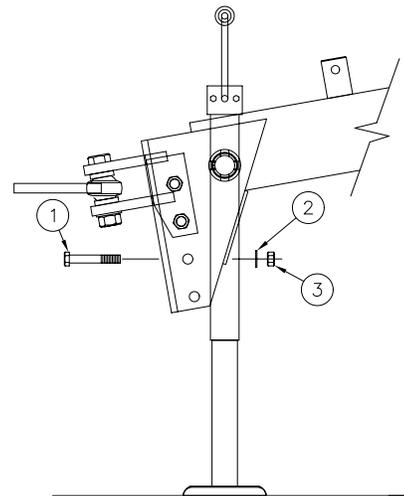
## Hitching to Tractor

Refer to Figure 4

1. Back tractor to drill. Using the screw jack, adjust drill tongue to get drawbar under upper hitch plate (1).
2. Align rear hole in upper hitch plate with large hole in drawbar. Place lower hitch plate (4) under drawbar and attach to upper hitch plate with two 5/8 x 4 inch bolts (5), flat washers (6) and nylock nuts (7).
3. Bolt top upper hitch plate through hole in drawbar to lower hitch plate with 1 x 5 1/2 inch bolt (8), USS flat washer (3) and nylock nut (2).
4. Securely attach safety chain to drill hitch with a 3/4 x 2 1/4 inch bolt (10), safety washer (11), lock washer (12) and nut (13). Then attach chain to tractor drawbar.

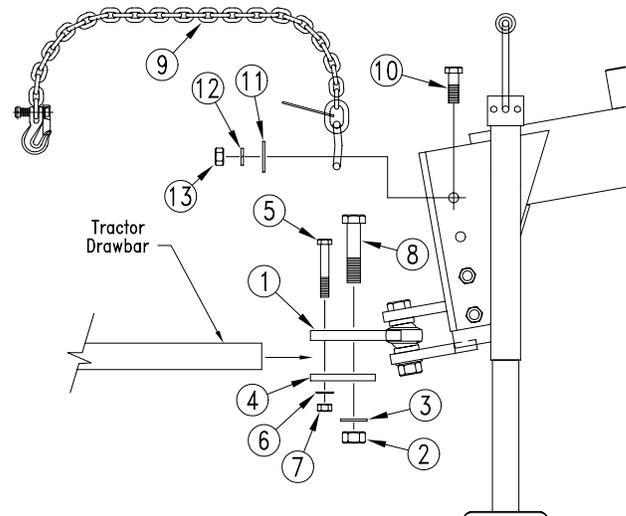
Refer to Figure 5

5. Store jack on top of tongue.



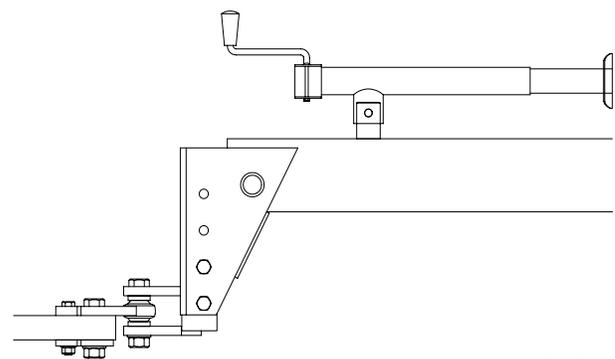
**Figure 3**  
**Hitch Height**

21703



**Figure 4**  
**Hitching to Tractor**

13944



**Figure 5**  
**Jack Storage Position**

13940

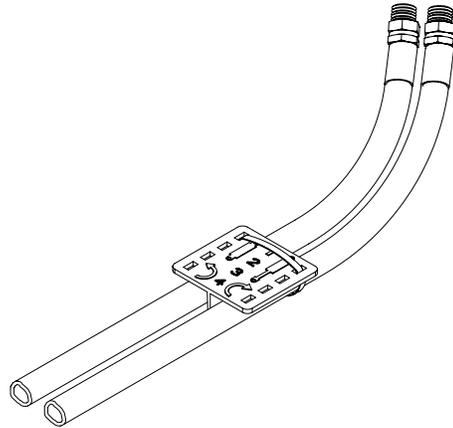
## Hydraulic Hose Hookup

Refer to Figure 6

Great Plains hydraulic hoses are color coded to help you hook up hoses to your tractor outlets. Hoses that go to the same remote valve are marked with the same color.

Color	Hydraulic Function
Blue	Transport Lift Cylinders

To distinguish hoses on the same hydraulic circuit, refer to plastic hose holder. Hose under extended-cylinder symbol feeds cylinder base ends. Hose under retracted-cylinder symbol feeds cylinder rod ends.



17641

**Figure 6**  
Hydraulic Hose Label

## Rephasing Cylinders

The lift cylinders may, after a period of time, get out of time or phase. The effects of this can be seen when one side of the drill is running too low or too high because its lift cylinder is either over extended or not retracted compared to the other lift cylinder.

To rephase the cylinders, raise drill completely and hold tractor hydraulic lever on for a few seconds to give cylinders time to rephase.

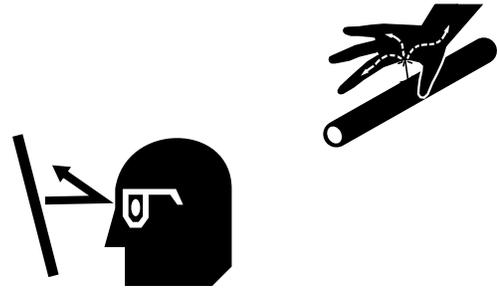
Each time drill is raised out of ground momentarily reverse hydraulic lever immediately after rephasing to allow cylinders to retract about 1/2 inch. This will help in maintaining a level drill.

**NOTE:** Understand that having cylinders become gradually out of time is different than having air trapped in the system from improper bleeding. Each condition is corrected differently.

## Bleeding Hydraulics

### WARNING

*Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.*



Check that tractor hydraulic reservoir is full.

The drill lifting system is equipped with rephasing type hydraulic cylinders that require a special procedure for bleeding air from the hydraulic circuits. Read and follow this procedure carefully. Rephasing type cylinders will not function properly with air in hydraulic circuit.

1. Check hydraulic fluid in tractor reservoir and fill reservoir to proper level. Drill-system capacity is about 1 gallon. Add fluid to system as needed. A low reservoir level may draw air back into the system, causing jerky or uneven cylinder movements.
2. With drill attached to tractor, jack drill up and support frame at ends near gauge wheels.
3. With drill raised and supported, unpin cylinders from gauge wheel arms and frame. Turn cylinders "rod end up". Wire or otherwise safely support rod ends higher than base ends.

**NOTE:** In order to prevent trapped air pockets, rod end must be higher than any other part of cylinder during bleeding operation.

4. With tractor engine idling, engage tractor hydraulics to extend cylinder rods. When cylinder rods are completely extended, hold remote lever on for one minute.
5. Retract cylinders. Extend cylinders again and hold remote lever on for one more minute. Repeat this step two more times to completely bleed system.

6. Repin cylinders to drill frame and gauge wheel arm with transport cylinder locks in place. If any air still is trapped in either cylinder, the cylinder will have a spongy, erratic movement and drill will not raise evenly. If necessary, repeat bleeding process.
7. Refill tractor hydraulic fluid reservoir to its proper level.

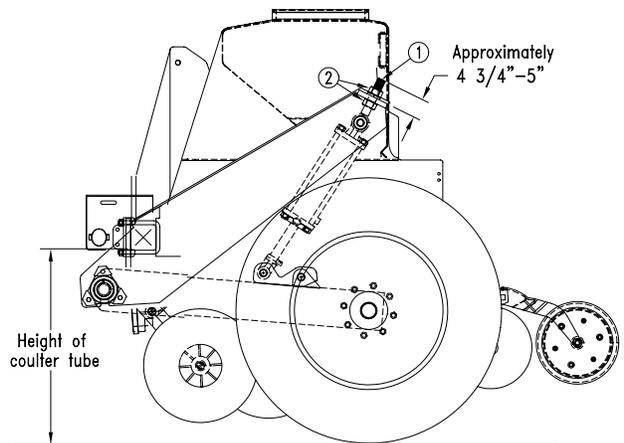
NOTE: After the drill is raised, a slight settling will occur due to the action of the rephasing cylinders.

## Leveling Drill

Refer to Figure 7

1. Loosen locknuts (2) and adjust cylinder eyebolts (1). The eye bolts are factory pre-set at 4 3/4" of thread above mounting plate.
2. Raise drill with hydraulics until openers and coulters are 1 to 2 inches off the ground.
3. Measure height of coulters from ground on both ends of drill.
4. Adjust eyebolt to level drill from end to end.
5. Tighten nuts on eyebolts when drill is level.

Note: Do not exceed 5" of thread above mounting plate. This could lead to hydraulic cylinder damage.



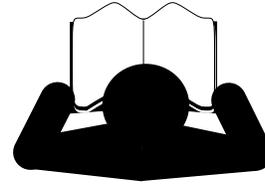
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**Figure 7**  
**Leveling Drill**



# Operating Instructions

This section covers general operating procedures. Experience, machine familiarity and the following information will lead to efficient operation and good working habits. Always operate farm machinery with safety in mind.

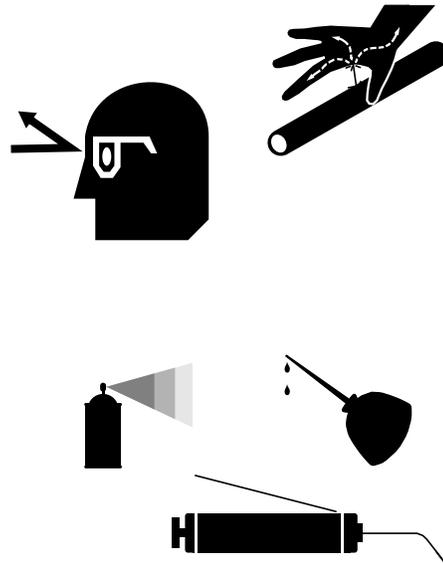


## Prestart Checklist

### WARNING

*Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.*

1. Carefully read "Important Safety Information," page 1.
2. Lubricate drill as indicated under "Lubrication," page 33.
3. Check all tires for proper inflation. See "Appendix," page 41.
4. Check all bolts, pins and fasteners. Torque as shown in "Appendix," page 41.
5. Check drill for worn or damaged parts. Repair or replace parts before going to the field.
6. Check hydraulic hoses, fittings and cylinders for leaks. Repair or replace before going to the field.
7. Rotate both gauge wheels to see that the drive and meters are working properly and free from foreign material.



## DANGER

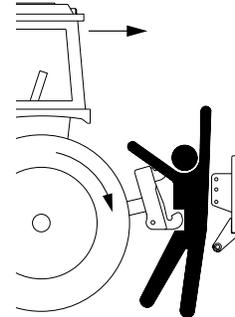
*Watch your step when walking on drill ladder and walkboard. Falling from drill could cause severe injury or death.*

## Field Operation

### DANGER

*You may be severely injured or killed by being crushed between the tractor and drill. Do not stand or place any part of your body between drill and moving tractor. Stop tractor engine and set park brake before installing pins.*

1. Hitch drill to a suitable tractor.
2. Set seed population as explained in the seed rate book.
3. Load box with clean seed.
4. Raise drill. Rotate gauge wheel. Check that feed cups, seed tubes and drives are working properly and free from foreign material by looking for seed flow under each opener.
5. Record acremeter readout. Subtract initial reading from later readings to determine acres drilled.
6. Pull forward, lower drill and begin seeding.
7. Always lift drill out of the ground when turning at row ends and for other short-radius turns. Seeding will stop automatically as drill is raised.



## Opener Operation

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**IMPORTANT:** Never back up with openers in the ground. To do so may cause damage or opener plugging.

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For information on opener adjustments, refer to page 25. For more information on troubleshooting opener problems, see "Troubleshooting", page 29.

## Transporting

### **WARNING**

Towing the drill at high speeds or with a vehicle that is not heavy enough could lead to loss of vehicle control. Loss of vehicle control could lead to serious road accidents, injury and death. To reduce the hazard, do not exceed 20 mph. Check that your tractor has enough ballast to handle the weight of the drill. Refer to your tractor operator's manual for ballast requirements.

### **CAUTION**

Failure of hydraulic cylinders during transport will cause drill to drop suddenly, which could lead to serious road accidents, injury or death. To prevent an accident, always install cylinder locks before transporting drill.

Before transporting the drill, follow and check these items:

#### **Cylinder Locks**

Refer to Figure 8

Cylinder locks are located near both hydraulic cylinders. With drill fully raised place lock over rod of cylinder and secure in place with pin and clip.

NOTE: The cylinder locks can be engaged or disengaged only after the drill is fully raised.

#### **Unload Drill Box**

The drill can be transported with a full box of grain, but the added weight will increase stopping distance and decrease maneuverability. Unload drill box before transporting if at all possible.

#### **Clearance**

Remember that the drill is wider than the tractor. Allow safe clearance.

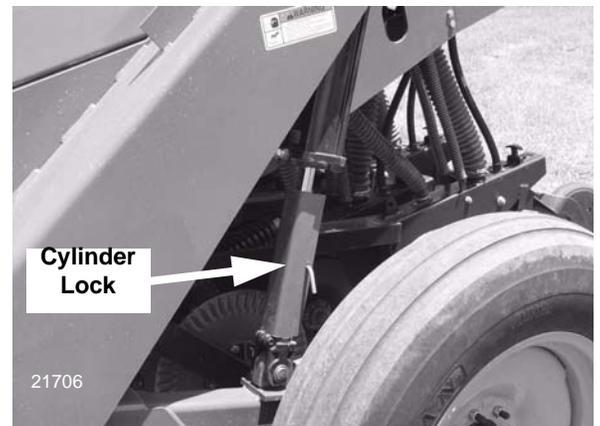
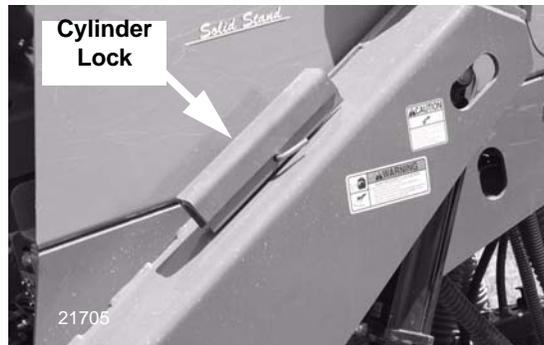
#### **Road Rules**

Comply with all federal, state and local safety laws when traveling on public roads.

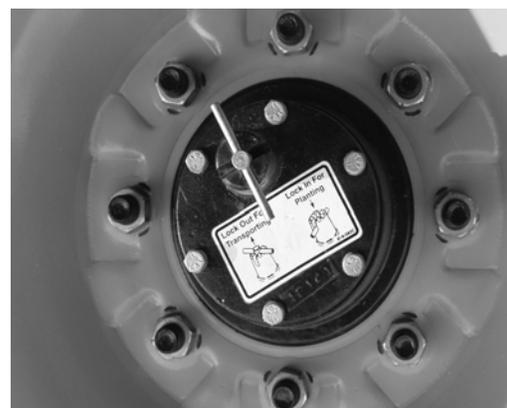
#### **Lock-out Hub**

Refer to Figure 9

Make sure drive lock-out hub on both sides of drill are disengaged before transporting. This will prevent excessive wear of drive system during transport.



**Figure 8**  
Cylinder lock



**Figure 9**  
Lock-out Hub

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## Parking

Perform the following steps when parking the drill. Refer to “Storage”, page 32, to prepare for long-term storage.

1. Park drill on a level, solid area.
2. Lower drill until openers are resting on the ground.
3. Securely block tires to prevent rolling.

*Refer to Figure 10*

4. Remove tongue jack from storage stob. Pin jack on side of tongue. If ground is soft, place a board or plate under jack.
5. Extend jack until tongue weight is off tractor drawbar.
6. Unplug hydraulic hoses and wiring harness from tractor. Do not allow hose ends or harness ends to rest on the ground.
7. Remove hitch bolt and safety chain from tractor drawbar.



**Figure 10**  
**Jack Storage Position**

# Adjustments

## Coulter Adjustments

Refer to Figure 11

A no-till coulters (1) is mounted directly ahead of each opener on the drill. The coulters cut through heavy trash and make a groove in the soil for the openers. The coulters are mounted on the drill frame so coulters cutting depth changes as the drill is raised and lowered.

To set drill seeding depth, you must:

1. Set coulters depth with hydraulic stop.
2. Set opener depth with T-handles on press wheels.
3. If soil conditions make it necessary, increase coulters down pressure by adding weights.

If necessary, adjust individual coulters or openers to seed in tire tracks, refer to page 24.

Coulters cutting depth is controlled by a depth control valve.

The amount of coulters down force needed to cut a soil groove varies with soil conditions. Adding weight or shortening the coulters spring increases coulters down pressure and cutting force.

### Coulters Depth Control

The master-slave lift cylinders on your drill control the depth of the coulters. A depth valve regulates the retracted length of these cylinders.

Refer to Figure 12

1. Slightly raise drill with depth stop engagement arm on the rock shaft not touching the valve.
2. Turn the depth control knob clockwise. Each rotation lowers the coulters approximately 1/4 inch.
3. Raise and lower drill a few times to recheck depth.

NOTE: Changing depth of coulters will effect planting depth of openers. Press wheels will need to be adjusted accordingly.

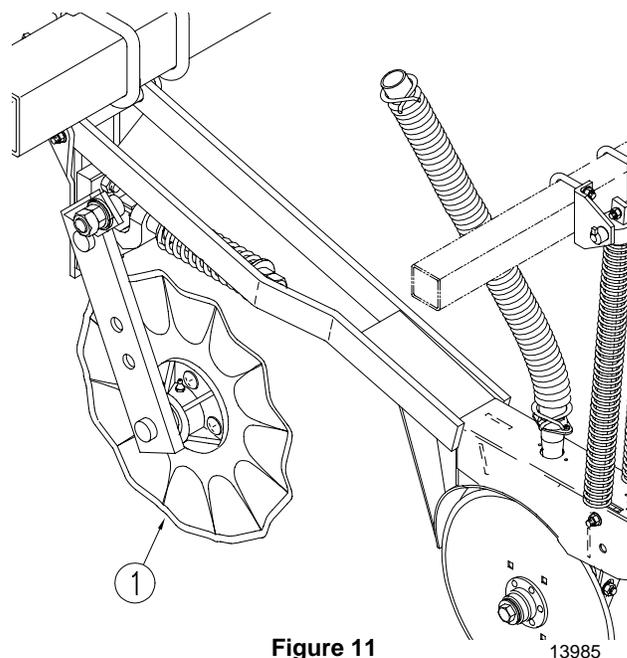


Figure 11  
Coulters

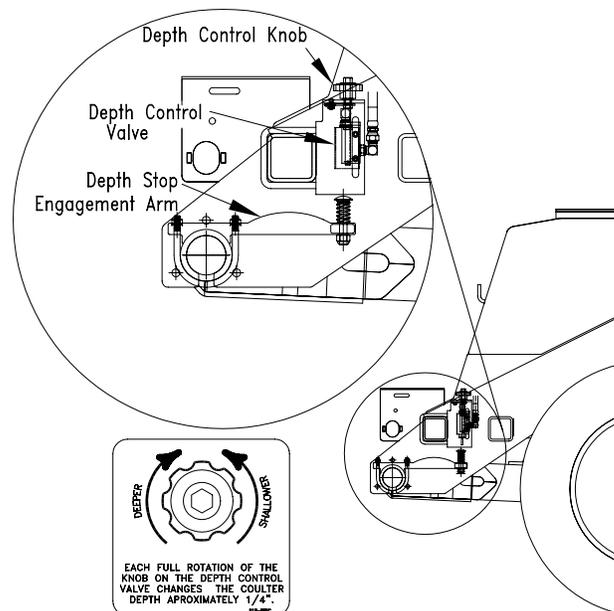


Figure 12  
Coulters Depth Stop

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## Coulter Down Pressure

### Weights

If more weight is required for your soil conditions, add weights to weight brackets located on box frame. No more than 1100 pounds for the 706 (550 pounds per side) and 1500 pounds for the 1006 (750 pounds per side) should ever be added. Add an equal amount of weight to each end of drill. See Table 1.

Pounds Per Coulter			
	7 inch	7.5 inch	8 inch
Empty Drill	274	282	290
Drill with 300 pounds added	304	314	323
Drill with 600 pounds added	334	345	356

Table 1  
Weight Chart

Refer to Figure 13

### Spring Length

Coulter springs are preset at 9 7/8 to 10 inches, giving coulters an initial operating force of 400 pounds. This setting is adequate for many difficult no-till conditions.

**IMPORTANT:** Resetting coulters-spring length shorter than 9 3/4 inches may contribute to premature failure of parts and warranty will be voided. If additional force is needed, add weights to drill.

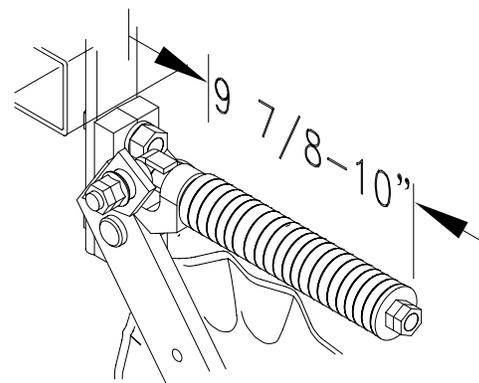


Figure 13  
Coulter Spring Length

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For lighter no-till conditions where rocks or other obstructions are a problem, you can lengthen coulters springs to protect coulters from impact. Refer to Table 2.

### Individual Coulter Adjustment

Individual coulters can be lowered if coulters follow in tractor tire tracks and do not give satisfactory depth. To do so:

1. Loosen 5/8 inch jam nuts on 5/8 inch square head set screws. Then loosen set screws.
2. Lower coulters to desired depth.
3. Tighten set screw on side of coulters clamp first. This squares coulters bar in clamp.
4. Tighten set screw on front of coulters clamp. Then tighten both 5/8 inch jam nuts on each set screw.

NOTE: Torque 5/8 inch set screws 85-100 ft-lbs to obtain adequate holding force.

Spring Length	Initial Vertical Coulter Force
10 1/2 inches	175 pounds
10 1/4 inches	300 pounds
10 inches	400 pounds
9 3/4 inches	525 pounds

Table 2  
Spring Length Chart

## Opener Adjustments

### Opener Down Pressure

Refer to Figure 14

Opener springs provide the down pressure necessary for opener disks to open a seed trench. The springs allow the openers to float down into depressions and up over obstructions.

Each opener spring can be adjusted for down pressure. This is useful when penetrating hard soil and for planting in tractor tire tracks.

To adjust the pressure, remove "W" clip at bottom of spring. Place "W" clip in a higher hole in spring rod for more pressure or in a lower hole for less pressure.

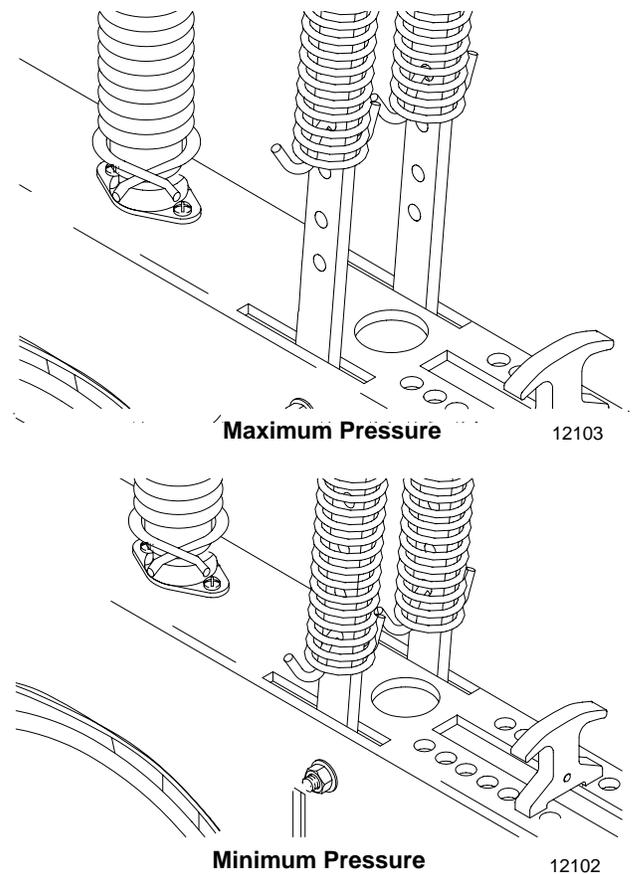


Figure 14  
Opener Down Pressure Adjustment

### Opener Seeding Depth

Refer to Figure 15

A press wheel attached to each opener body controls seeding depth. To maintain consistent depth, the relationship between the bottom of the opener disks and press wheel is fixed upwardly by an adjustable stop on each opener.

The press wheels also close the seed trench and gently press soil over seed. To provide consistent soil firming, press wheels are free to move down from normal operating position. This maintains pressing action even if opener disks encounter obstructions or hard soil.

Set opener seeding depth by adjusting press-wheel height. To adjust, first raise drill slightly, then lift and slide T-handles on top of openers as shown in .

- For shallower seeding, slide T-handles toward drill.
- For deeper seeding, slide T-handles away from drill.

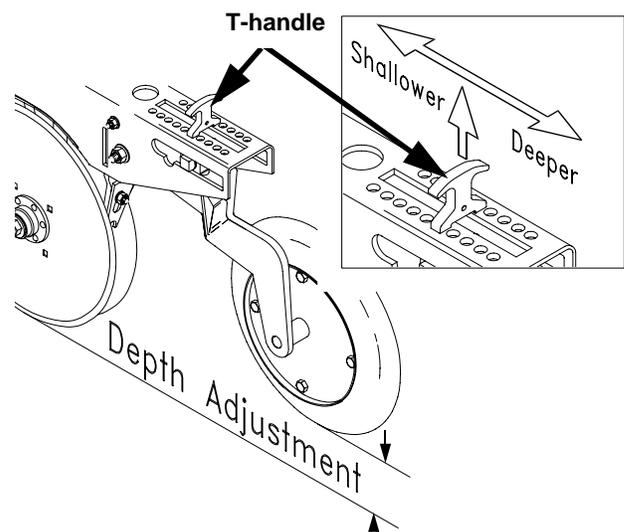


Figure 15  
Press Wheel Adjustment

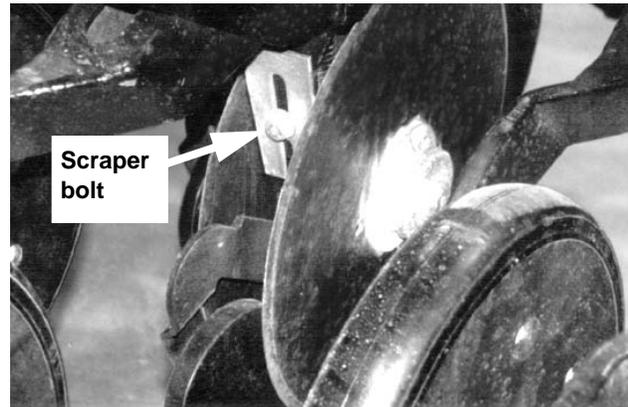
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## Disk Scraper Adjustment

*Refer to Figure 16*

To keep opener disks turning freely, dirt scrapers are mounted between disks to clean as the disks rotate. As field conditions vary, scrapers may need to be adjusted. In damp conditions, scrapers may need to be lowered. If openers are not turning freely, scrapers may need to be raised.

To adjust scrapers, loosen 3/8 inch bolt and move scraper as needed.



**Figure 16**  
Disk Scraper Adjustment

16163

## Gauge Wheel Idler Adjustment

*Refer to Figure 17*

Located inside the left hand gauge wheel arm is two idler sprockets which should be readjusted after the first 100 acres of drill use. From then on, readjust at the beginning of each season.

To adjust, move front idler sprocket on top of chain down by loosening jam nut and screwing in adjustment stud.

Retighten jam nut to maintain idler position.

NOTE: Do not over-tighten chains. To do so will cause excessive wear.

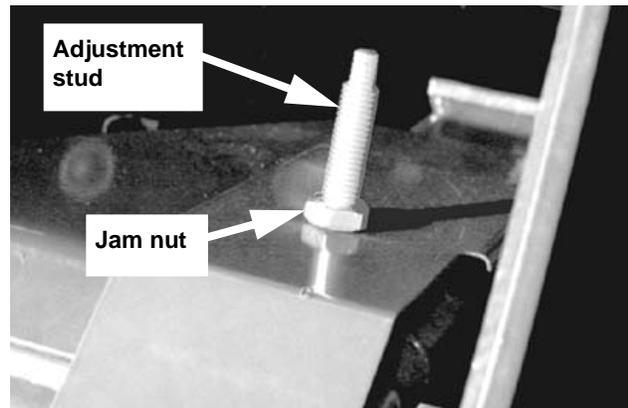
## Drive Clutch

*Refer to Figure 18*

The main drive clutch on your drill is a mechanical-release, jaw-style design. You may need to adjust the clutch for proper engagement and disengagement.

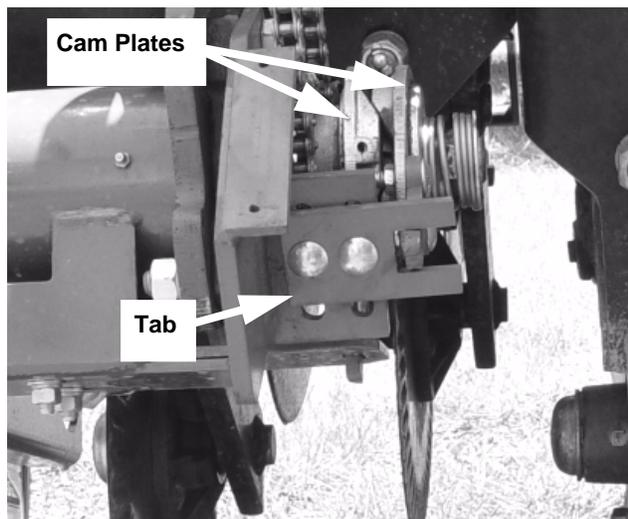
When properly adjusted, the cam plates will disengage the clutch jaws completely when the drill is raised. When lowered in field position, clutch jaws should be engaged.

To adjust, loosen bolts on clutch tab. Slide tab forward or back to change point at which cam plates meet. When satisfied with adjustment, retighten bolts on clutch tab.



**Figure 17**  
Gauge Wheel Idler Adjustment

14744



**Figure 18**  
Drive Clutch

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## Drive Train Operation

*Refer to Figure 19*

Check all chain idlers at beginning of each season for proper adjustment. Check that each idler is taking up excess chain slack. The access door is located on the top side of the gage wheel arm near the pivot end.

After first 100 hours of use and at beginning of each season, readjust idler sprocket in left wheel arm. To access idlers, remove access door.

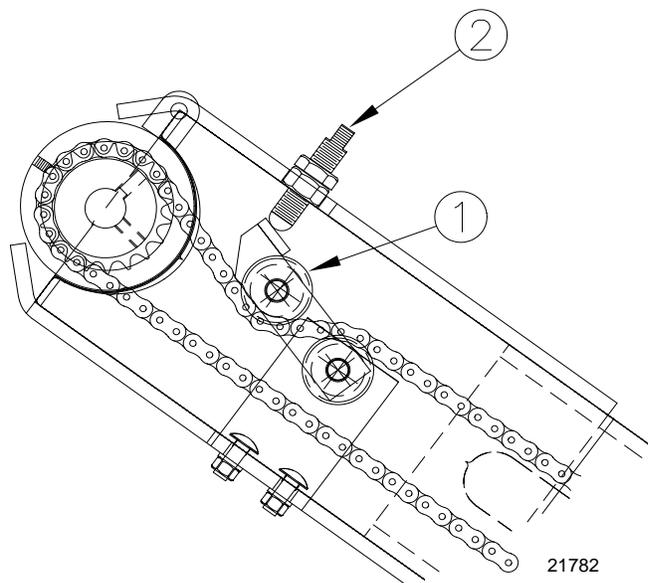


**Figure 19**  
Access Door

*Refer to Figure 20*

To adjust idler sprocket, move top idler sprocket (1) down into chain by loosening jam nut and screwing in adjustment stud (2). Retighten jam nut to maintain idler position.

**NOTE:** Do not overtighten chains. Overtightening chains will cause excess wear on idlers and drive components. Be sure chain is installed with the chain connector link retainer towards the center-line and the clip opening (split end) faces the opposite way of the chain travel.



**Figure 20**  
Idler Sprocket Adjustments

## Spring Tine Harrow

### Harrow Tine Angle

Refer to Figure 21

The drawing on the right shows a successful harrow position for no-till and minimum-till conditions. Because of different soil moisture, trash levels and trash types, you may need to reposition the tube frame or tines. Initially position the frame and tines as shown, then readjust as necessary.

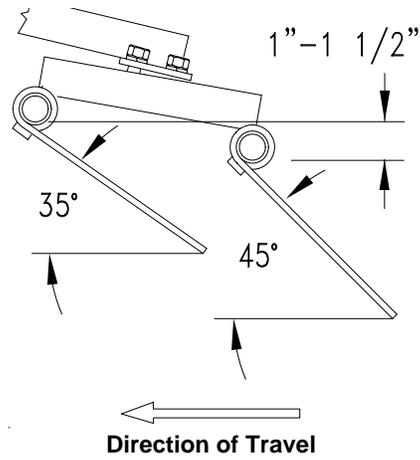


Figure 21  
Tine Angle

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### Harrow Frame and Tine Adjustment

Refer to Figure 22

To adjust harrow frame loosen the four hex nuts (1) on the u-bolts and rotate frame tube (2) as necessary.

To adjust tines, loosen the four 1/2-inch hex nuts (3) on the 1/2-inch u-bolts (4) on the support bar (5). Rotate tine tubes (6) so tines (7) are against stop bushings (8) and are angled back as necessary. Retighten hex nuts on u-bolts.

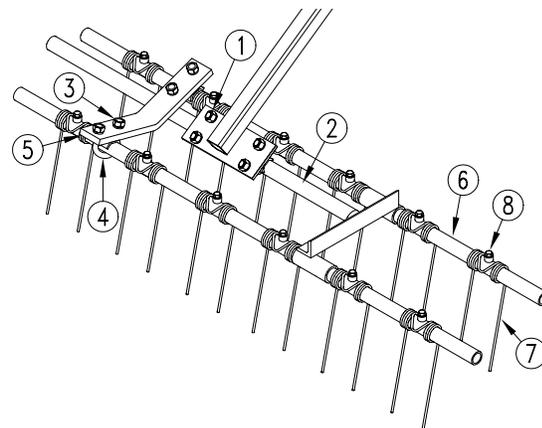


Figure 22  
Frame and Tine Adjustment

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### Harrow Chain

Refer to Figure 23

In clean, tilled, extremely loose soils, harrow chain may need to be shortened to lift harrow off the ground.

To adjust chain, support the harrow to remove weight from the harrow arms. Remove the lower bolt and select a different chain link.

Note: Keep the harrow arms at the same length.

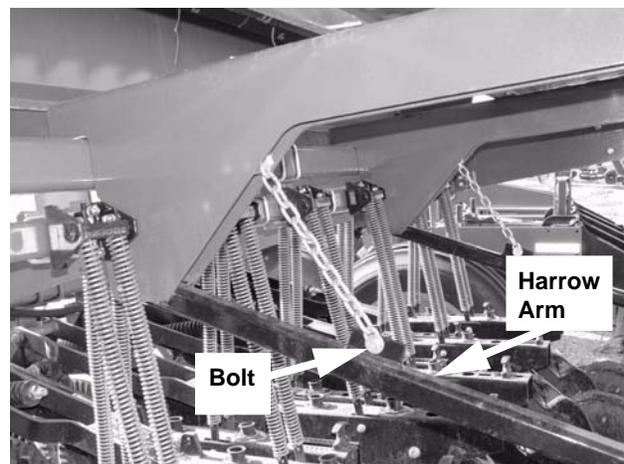


Figure 23  
Harrow Chain Adjustment

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## Troubleshooting

Problem	Cause	Solution
Uneven seed spacing or uneven stand	Excessive field speed.	Reduce field speed.
	Feed cups plugging.	Clean out feed cups.
	Seed tubes plugging.	Clean out seed tubes.
	Opener disks not turning freely.	See “Opener disks not turning freely” in this Troubleshooting section.
	Opener not penetrating low spots.	Adjust opener, page 25.
		Use faster drive type speed and close feed cup flutes to a more narrow position.
Uneven seed depth	Excessive field speed.	Reduce field speed.
	Planting conditions too wet.	Wait until drier weather.
	Drill not level.	Readjust, page 18.
	Incorrect hitch height.	Readjust hitch height, page 15.
Opener disks not turning freely	Trash or mud build up on disk scraper.	Adjust scraper, page 26.
	Scraper adjusted too tight, restricting movement.	Adjust scraper, page 26.
	Failed disk bearings.	Replace disk bearings.
	Bent or twisted opener frame.	Replace opener frame.
	Planting conditions too wet.	Wait until drier weather.
	Too much opener down pressure.	Readjust opener down pressure, page 25.
	Incorrect press wheel adjustment.	Readjust press wheel, page 25.
Actual seeding rate different than desired	Improper tire size or air pressure.	Check tire size and air pressure, page 41.
	Build up of seed treatment in feed cup.	Clean seed treatment from feed cups.
	Incorrect rate adjustment.	Check gearbox setting and seed-rate handle setting, refer to the seed rate book.
Excessive seed cracking	Excessive field speed.	Reduce field speed.
	Feed cup flutes not open enough.	Open feed cups to a wider position.
	Feed cup door handle not open enough.	Open feed cup door handle to a lower position.
Acremeter does not measure accurately.	Incorrect tire size or air pressure.	Correct tire size or air pressure, page 41.
	Excessive overlap or gaps between passes.	Avoid overlap or gaps.
	Soil conditions.	Loose soil and slippage will cause variations in acres registered.
	Acremeter not for your width of drill.	Refer to parts manual.
	Actual field size different.	Verify field size.

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
<b>Press wheels not compacting soil as desired</b>	Too wet or cloddy.	Wait until drier weather or rework ground.
	Incorrect hitch height.	Readjust hitch height, page 15.
	Press wheel depth does not match coulter depth.	Readjust press wheel depth, page 25.
	Not enough down pressure on disk openers.	Increase down pressure on openers, page 25.
<b>Grain box not emptying evenly</b>	Some models do not have same number of feed cups between each divider of bulkhead.	
<b>Press wheel or openers plugging</b>	Planting conditions too wet.	Wait until drier weather.
	Too much down pressure on openers.	Reduce down pressure on openers, page 25.
	Backed up with drill in the ground.	Clean out and check for damage.
	Failed disk bearings.	Replace disk bearings.
	Scraper worn or damaged.	Replace scraper.
<b>Raising and lowered drill is rough or uneven</b>	Wheel arm pivot casting needs lubricating.	Lubricate wheel arm pivot castings.
	Leaking hydraulic fittings.	Check fittings for leaks, see page 16 for safety message.
	Rephasing cylinders not bled properly.	See page 16 for information.
<b>Feed cup sprockets locked up or twisted feed cup drive shaft</b>	Foreign matter lodged in one or more feed cup sprockets.	Clean out feed cup sprockets. Use clean seed.
	Dried liquid insecticide inside feed cups.	Remove build up by disassembling each feed cup and scraping foreign substance from turn surfaces.
<b>Coulters not going deep enough</b>	Not enough weight.	See page 24 for correct weight.
<b>Coulters and drill going too deep</b>	Too much weight.	See page 24 for correct weight.
	Incorrect depth control setting.	Reset depth control, page 23.
	Incorrect press wheel adjustment.	Set press wheels to a shallower depth.
<b>Coulters and openers plugging in no-till conditions</b>		Drill at a slight angle to rows.
<b>Small seeds box not emptying evenly</b>	Adjustable divider not set evenly.	Move adjustable divider to create more volume in areas that run out first.
<b>Chain</b>	Debris, retainer clip	Be sure retainer clip is facing opposite way of chain travel.



## Maintenance and Lubrication

### Maintenance

Proper servicing and maintenance is the key to long implement life. With careful and systematic inspection, you can avoid costly maintenance, downtime and repair.

Always turn off and remove the tractor key before making any adjustments or performing any maintenance.

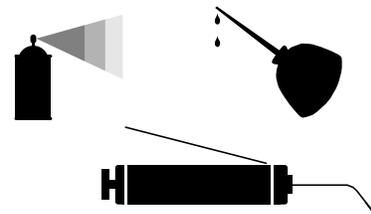
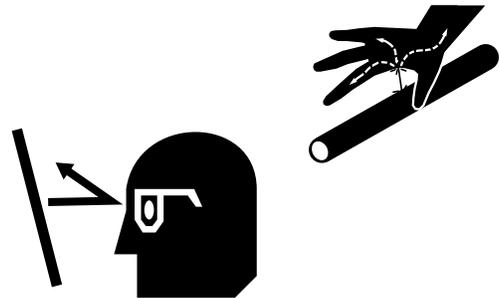
### WARNING

*You may be severely injured or killed by being crushed under the falling implement. Always have transport locks in place and frame sufficiently blocked up when working on implement.*

### WARNING

*Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.*

1. After using the drill for several hours, check all bolts to be sure they are tight.
2. Lubricate areas listed under “Lubrication”, page 33.
3. Adjust idlers to remove excess slack from chains. Clean and use chain lube on all roller chains as needed.
4. Inflate tires as specified on “Tire Inflation Chart”, page 41.
5. Clean out build up of seed treatment in feed cups.
6. Replace any worn, damaged or illegible safety decals. Order new decals from your Great Plains dealer. See “Safety Decals”, page 7.



## Storage

Store drill where children do not play. If possible, store the drill inside for longer life.

1. Unload seed box.
2. Thoroughly clean seed and seed-treatment residue from boxes and feed cups.
3. Remove any dirt and debris that can hold moisture and cause corrosion.
4. Lubricate and adjust all roller chains.
5. Take special care to oil feed cup drive sprocket in its square bore.
6. Lubricate areas noted under "Lubrication", page 33.
7. Inspect drill for worn or damaged parts. Make repairs and service during the off season.
8. Use spray paint to cover scratches, chips and worn areas on the drill to protect the metal.
9. Disconnect seed hoses from openers. Permanent elongation and premature cracking of hoses may occur if stored connected.
10. Cover with a tarp if stored outside.

## Lubrication

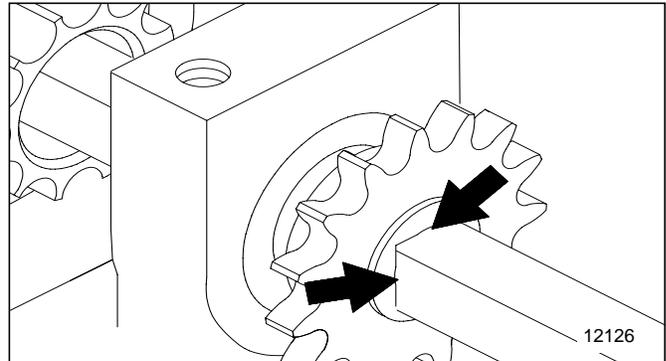
 Multipurpose spray lube	 Multipurpose grease lube	 Multipurpose oil lube	 50 Intervals at which lubrication is required
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### Feed Cup Drive Sprocket Bore

Type of Lubrication: Oil

Quantity = Coat sprocket bore thoroughly; move seed-rate handle back and forth to get oil into sprocket bore.

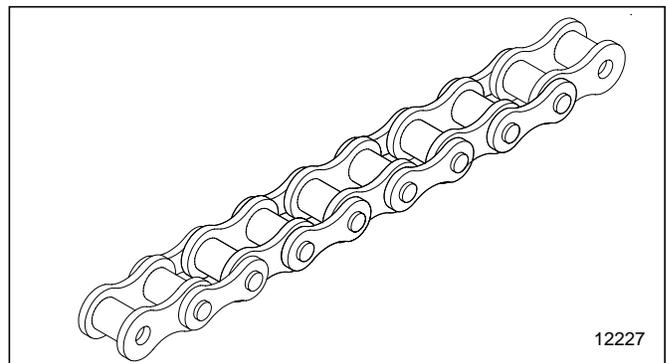


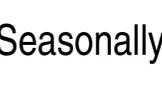
	
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### Drive Chains

Type of Lubrication: Chain Lube

Quantity = Coat thoroughly

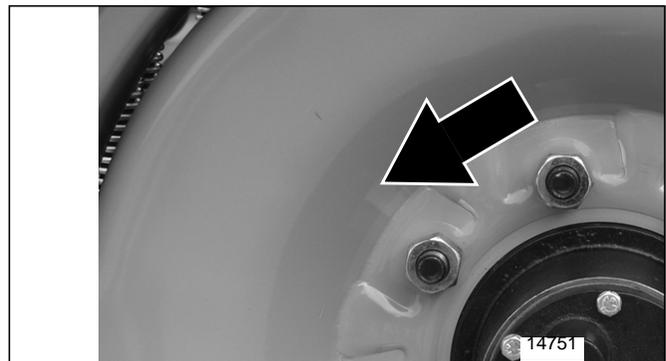


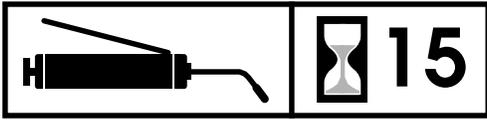
	
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### Wheel Bearings

Type of Lubrication: Grease

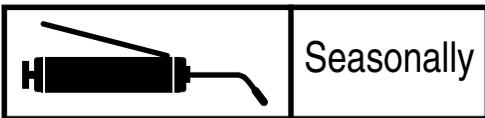
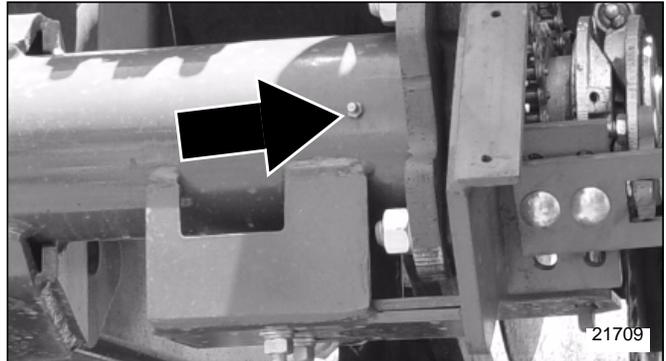
Quantity = Repack





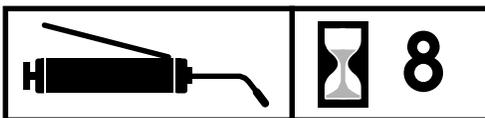
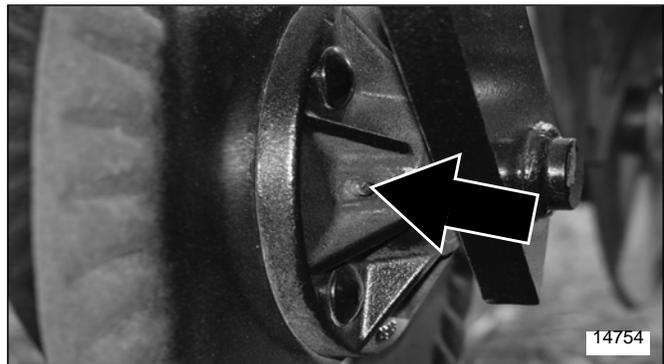
**Gauge Wheel Arms**

Type of Lubrication: Grease  
Quantity = Until grease emerges



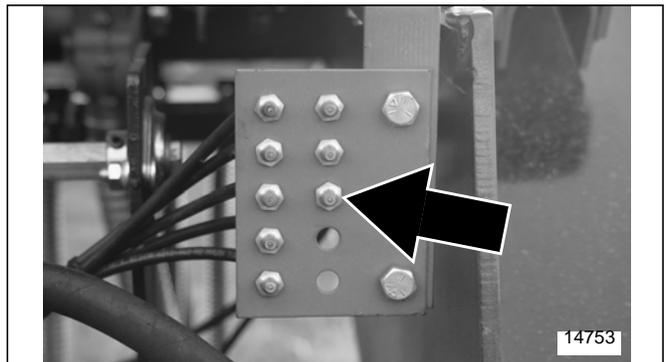
**Coulter Hub Bearings**

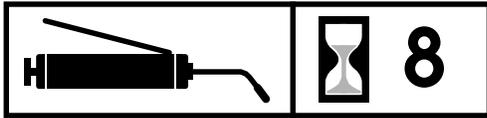
Type of Lubrication: Grease  
Quantity = Until resistance is felt



**Grease Banks**

Type of Lubrication: Grease  
Quantity = Until grease emerges





**Clutches**

Two zerks on each.

Smear grease on clutch engagement teeth.

Type of Lubrication: Grease

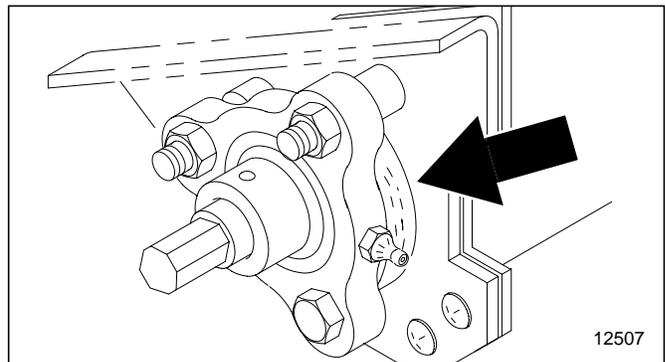
Quantity = Until grease emerges



**Fertilizer Felt Barrier Washers**

Next to each fertilizer-tray bearing

Type of Lubrication: Oil



**Gearbox**

The gearbox is lubricated and sealed at the factory. Under normal conditions, it does not require maintenance or lubrication.

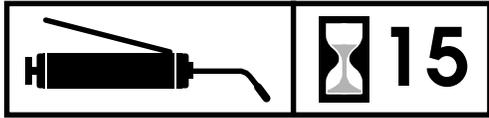
If the gearbox has been opened for repair, repack all gears and around shaft bearings using at least 7 oz. of gear lube, Great Plains Part No. 788067.

Keep moisture and dirt out of gearbox. Inspect (replace if needed) the rubber seals on gearbox drive and shifter shafts.

Spread a small skin coat of anaerobic sealant (Loctite 525 or equivalent) to gear case mating surfaces before bolting them back together.

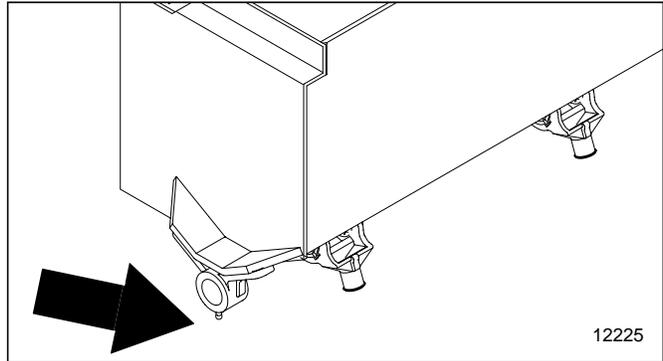
**IMPORTANT:** Use sparingly. Excess sealant may squeeze off the intended surface and lock bearings or gears.





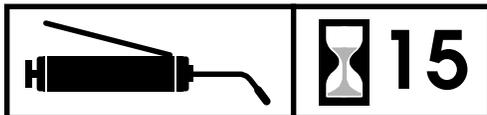
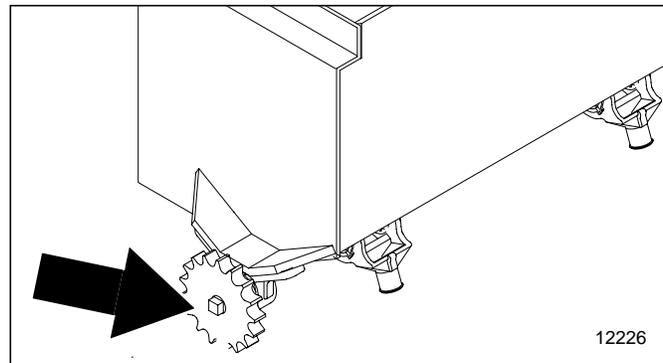
**Small Seeds Drive Sprocket Hanger Bearing**

Type of Lubrication: Grease  
Quantity = Until grease emerges



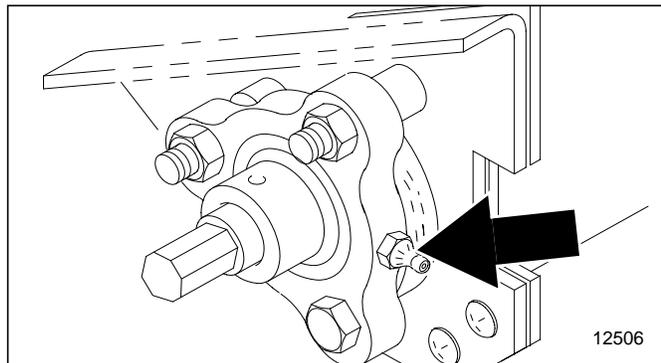
**Small Seeds Feed Cup Drive Sprocket**

Type of Lubrication: Oil  
Quantity = Coat sprocket bore thoroughly



**Fertilizer Tray Bearings**  
Both ends of shaft

Type of Lubrication: Grease  
Quantity = Until grease emerges





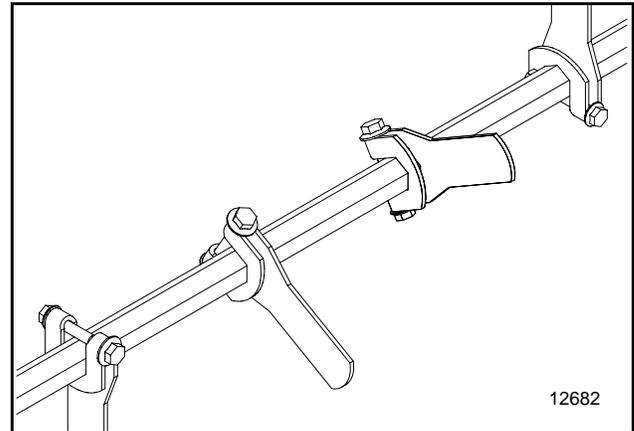
## Seed Box Agitator

The seed box agitator is designed to stir the seed directly above the metering cups. It is intended to cut down on the “bridging” of light fluffy seeds, and help to separate individual soybeans that become sticky from inoculant.

NOTE: The seed box agitator will not guarantee consistent seeding of hard to meter seeds such as Brome Grass or “bin run” seed that contains crop residue.

For lubrication points, refer to “Lubrication”, page 33.

To order the seed box agitator, contact your Great Plains dealer.



	Agitator Packages row spacing (inches)			706
	7	7.5	8	Part Number
Without small seeds, native grass or fertilizer	●			118-893A
		●		118-895A
			●	118-895A
With small seeds, native grass or fertilizer	●			118-894A
		●		118-896A
			●	118-896A

	Agitator Packages row spacing (inches)			1006
	7	7.5	8	Part Number
Without small seeds, native grass or fertilizer	●			118-897A
		●		118-899A
			●	118-901A
With small seeds, native grass or fertilizer	●			118-898A
		●		118-900A
			●	118-902A

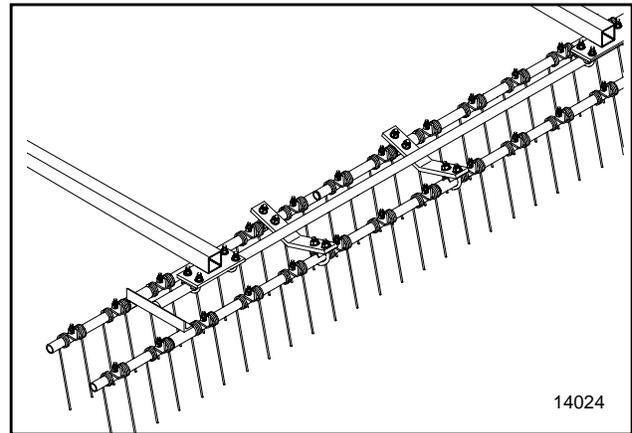
## Harrow Attachment

The coil-tine harrow finishes no-till surfaces by leveling and distributing residue for enhanced seed germination.

For information on how to adjust the harrow, refer to “Harrow Adjustment”, page 28.

To order the harrow attachment, contact your Great Plains dealer.

Harrow Packages	Part Number
706 Harrow Attachment	118-278A
1006 Harrow Attachment	118-279A

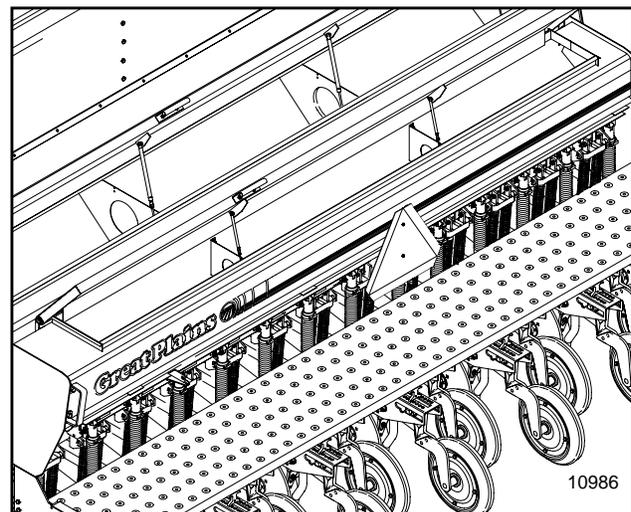


## Fertilizer Attachment

The fertilizer attachment allows you to plant seed and apply fertilizer in the same field pass. The fertilizer box mounts on the rear of the main drill box. A fertilizer drive meters dry, granular fertilizer.

For fertilizer meter rate calibrating and charts, refer to “Fertilizer Meter Rate” in the seed rate book. For lubrication points, refer to “Lubrication”, page 33.

To order the fertilizer attachment, contact your Great Plains dealer.



## Small Seeds Attachment

The small seeds attachment is designed to meter various small seeds. It is driven independently of the main seed box. The small seeds box is 0.24 bushel per foot (27.7 liters/meter) with a total capacity of 2.62 bushels (92.3 liters).

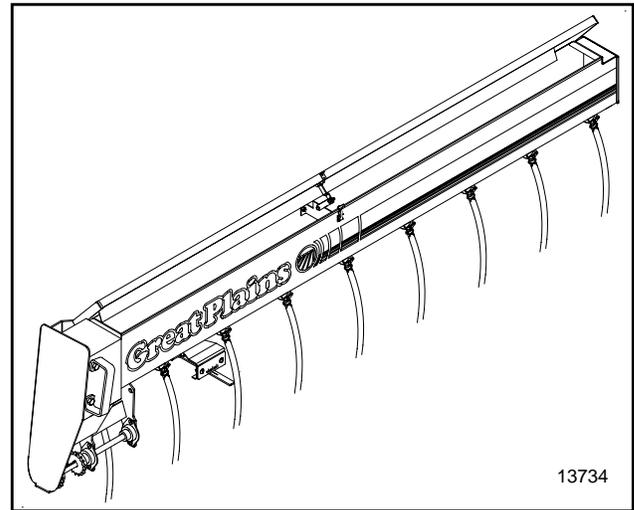
The small seeds attachment is available with two seed release point options: In row delivery and side delivery.

With the In row delivery, small seeds are metered and dropped between the disc blades or just in front of the press wheel.

With the side delivery, small seeds are metered and dropped just to the side of the opener furrow.

For seed rates and adjustments, refer to "Small Seeds Attachment" in the seed rate book. For lubrication points, refer to "Lubrication", page 33.

To order the small seeds attachment, contact your Great Plains dealer.



## Seed-Lok® Firming Wheels

The spring-loaded Seed-Lok® firming wheel presses seed directly into the bottom of the seed bed. The Seed-Lok® option provides more even emergence since seeds are planted and firmed at the same depth. Seed-Lok® can be used on all units except native grass, unless native grass tube is removed during Seed-Lok® use.

To order the Seed-Lok® firming wheels, contact your Great Plains dealer.

Seed-Lok® Packages	Part Number
Seed-Lok® Assembly	122-193K

## Series II Native Grass Attachment

The native grass attachment is designed to seed fluffy, hard-to-plant grasses.

For seed rates and adjustments, refer to “Native Grass Attachment” in the seed rate book.

To order the native grass attachment, contact your Great Plains dealer.

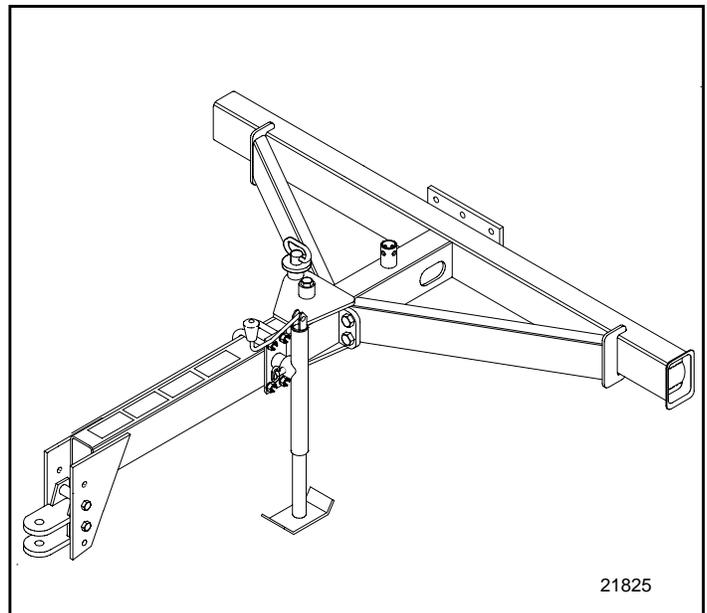


## Folding Tongue

The folding tongue is designed to allow narrower widths for trailer towing of drill and for space saving during storage.

To order the folding tongue, contact your Great Plains dealer.

Folding Tongue Packages	Part Number
1006 Folding Tongue	151-111A
706 Folding Tongue	151-114A





# Appendix

## Torque Values Chart

Bolt Size (Inches)	Bolt Head Identification					
						
	Grade 2		Grade 5		Grade 8	
in-tpi <sup>1</sup>	N · m <sup>2</sup>	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12
1/4" - 28	8.5	6	13	10	18	14
5/16" - 18	15	11	24	17	33	25
5/16" - 24	17	13	26	19	37	27
3/8" - 16	27	20	42	31	59	44
3/8" - 24	31	22	47	35	67	49
7/16" - 14	43	32	67	49	95	70
7/16" - 20	49	36	75	55	105	78
1/2" - 13	66	49	105	76	145	105
1/2" - 20	75	55	115	85	165	120
9/16" - 12	95	70	150	110	210	155
9/16" - 18	105	79	165	120	235	170
5/8" - 11	130	97	205	150	285	210
5/8" - 18	150	110	230	170	325	240
3/4" - 10	235	170	360	265	510	375
3/4" - 16	260	190	405	295	570	420
7/8" - 9	225	165	585	430	820	605
7/8" - 14	250	185	640	475	905	670
1" - 8	340	250	875	645	1230	910
1" - 12	370	275	955	705	1350	995
1-1/8" - 7	480	355	1080	795	1750	1290
1 1/8" - 12	540	395	1210	890	1960	1440
1 1/4" - 7	680	500	1520	1120	2460	1820
1 1/4" - 12	750	555	1680	1240	2730	2010
1 3/8" - 6	890	655	1990	1470	3230	2380
1 3/8" - 12	1010	745	2270	1670	3680	2710
1 1/2" - 6	1180	870	2640	1950	4290	3160
1 1/2" - 12	1330	980	2970	2190	4820	3560

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

## Tire Inflation Chart

Tire Size	Inflation PSI
9.0 x 24" 8-Ply Rib Implement	40

Bolt Size (Metric)	Bolt Head Identification					
						
	Class 5.8		Class 8.8		Class 10.9	
mm x pitch <sup>4</sup>	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M10 X 1.5	33	24	52	39	72	53
M10 X 0.75	39	29	61	45	85	62
M12 X 1.75	58	42	91	67	125	93
M12 X 1.5	60	44	95	70	130	97
M12 X 1	90	66	105	77	145	105
M14 X 2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16 X 2	145	105	225	165	315	230
M16 X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24 X 3	480	355	760	560	1050	780
M24 X 2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30 X 2	1060	785	1680	1240	2320	1710
M36 X 3.5	1730	1270	2650	1950	3660	2700
M36 X 2	1880	1380	2960	2190	4100	3220

<sup>1</sup> in-tpi = nominal thread diameter in inches-threads per inch

<sup>2</sup> N · m = newton-meters

<sup>3</sup> ft-lb = foot pounds

<sup>4</sup> mm x pitch = nominal thread diameter in millimeters x thread pitch

NOTE: All tires are warranted by the original manufacturer of the tire. Tire warranty information can be found in the brochures included with your Operator's and Parts Manuals or online at the manufacturer's websites. For service assistance or information, contact your nearest Authorized Farm Tire Retailer.

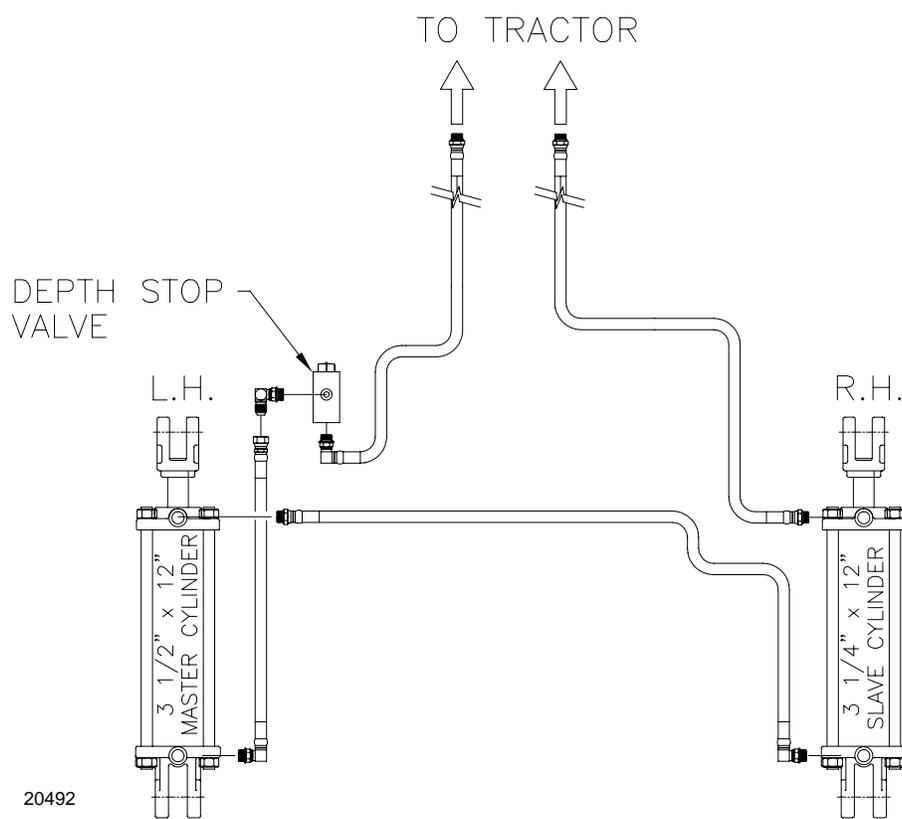
Manufacturer  
Titan  
Goodyear  
Firestone

Website  
[www.titan-intl.com](http://www.titan-intl.com)  
[www.goodyearag.com](http://www.goodyearag.com)  
[www.firestoneag.com](http://www.firestoneag.com)

## Specifications and Capacities

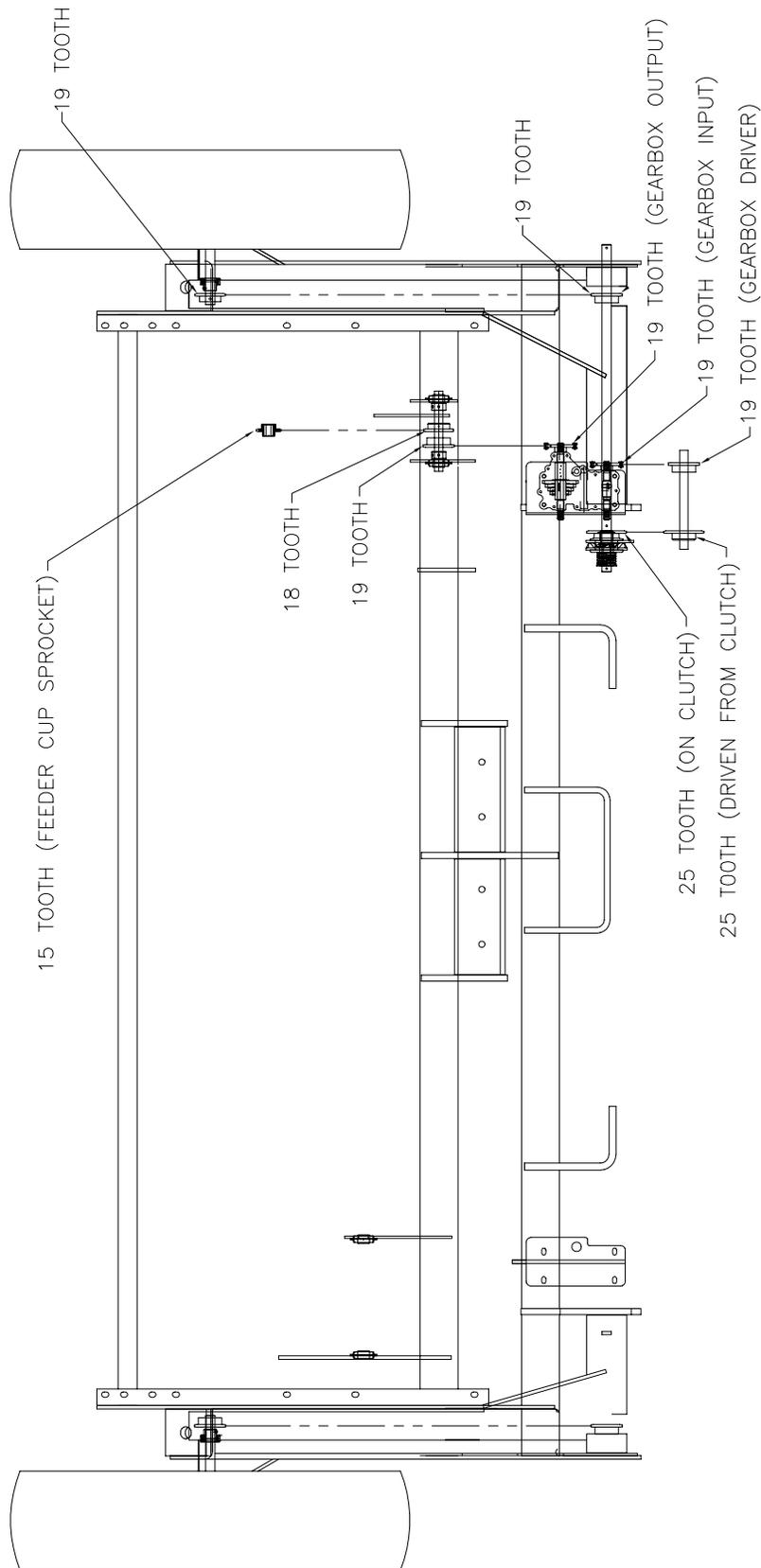
	706			1006		
<b>Row Spacing, Inches</b>	7	7.5	8	7	7.5	8
<b>Rows Per Drill</b>	11	10	10	16	15	14
<b>Approx. Weight, Pounds</b>	3,900	3,800	3,800	4,500	4,300	3,200
<b>Working Width</b>	7 feet			10 feet		
<b>Transport Width</b>	9 feet 10 inches			12 feet 7 inches		
<b>Transport Height</b>	6 feet 7 inches			6 feet 7 inches		
<b>Transport Length</b>	13 feet 10 inches			13 feet 10 inches		
<b>Approx. Seedbox Capacity</b>	17.1 bushels			23.75 bushels		
<b>End Wheel Tires</b>	9.00 x 24			9.00 x 24		
<b>Tractor Requirements</b>	55 horsepower; one remote valve			75 horsepower; one remote valve		

## Hydraulic Schematics



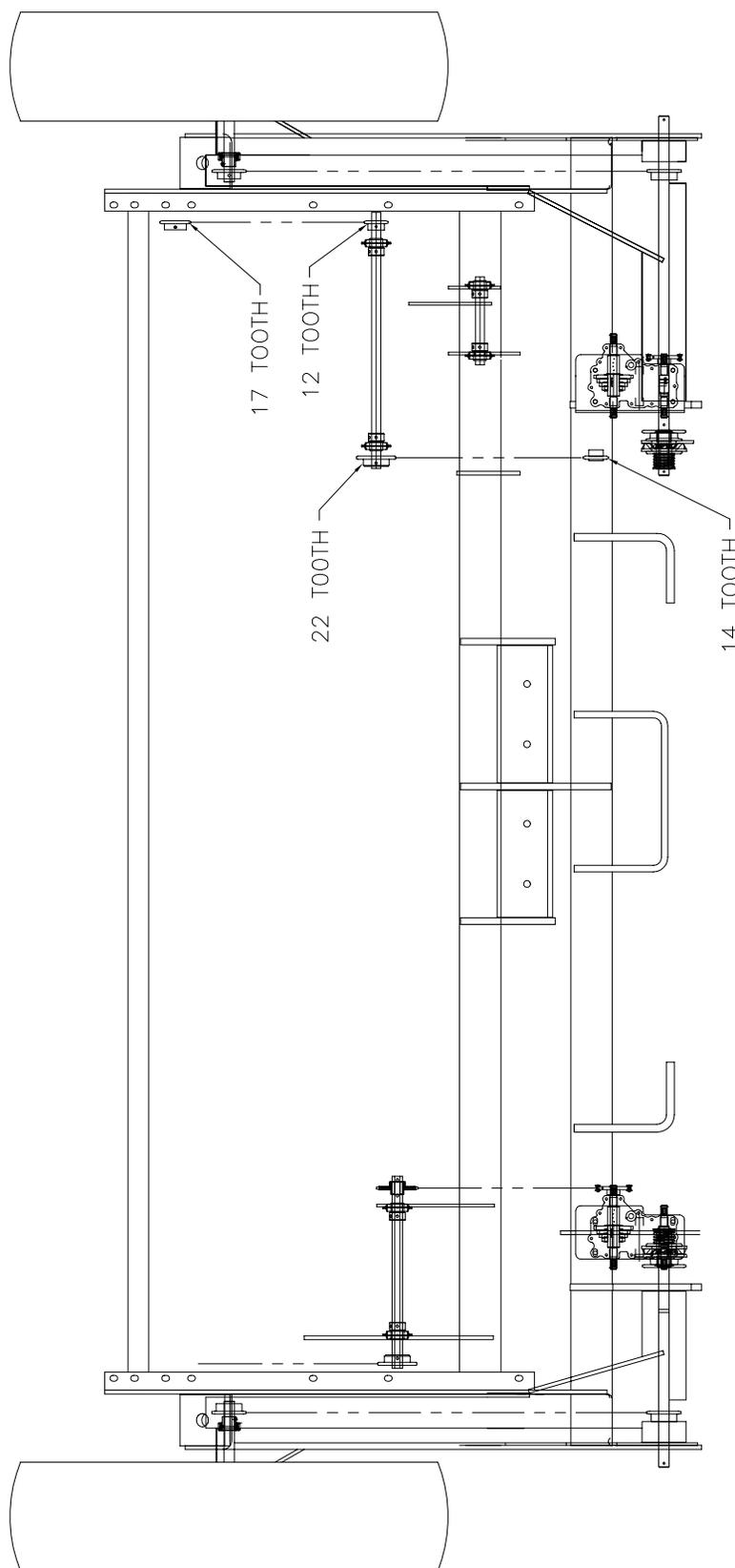
**Lift Hydraulics**

## Seed Box Sprocket Configuration



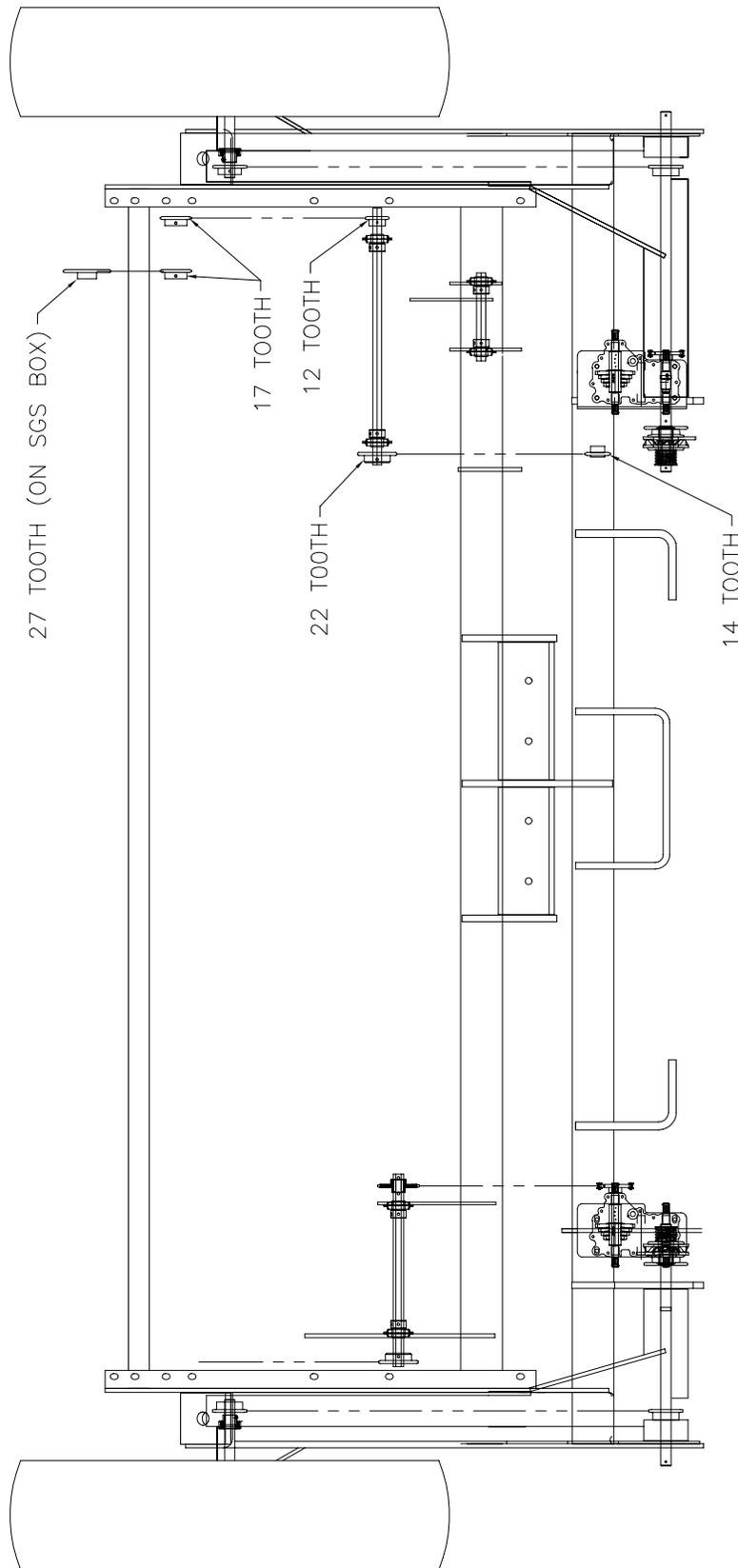
21754

# Seed Box Agitator Sprocket Configuration



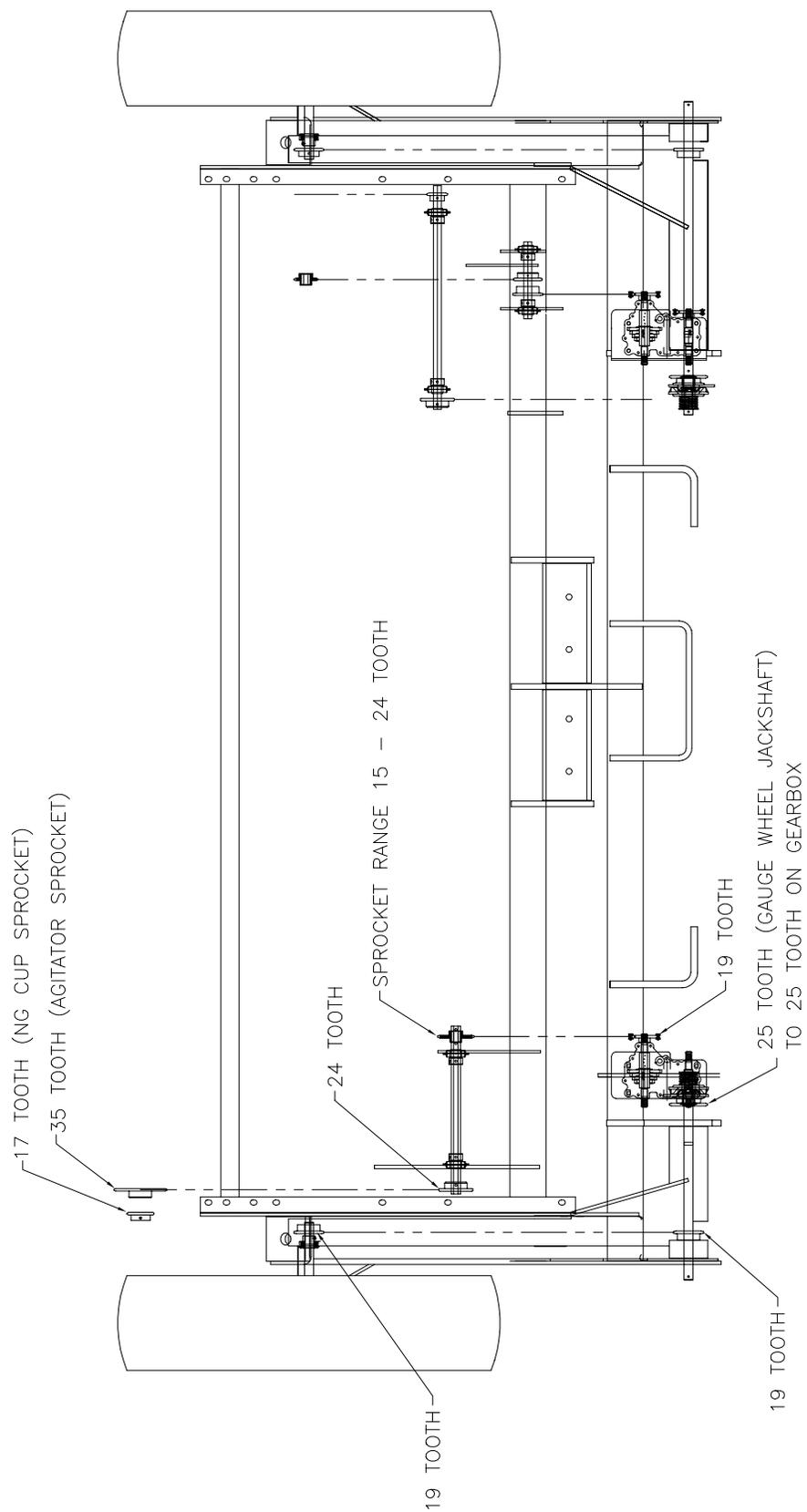
21753

## Small Grass Seeds Sprocket Configuration



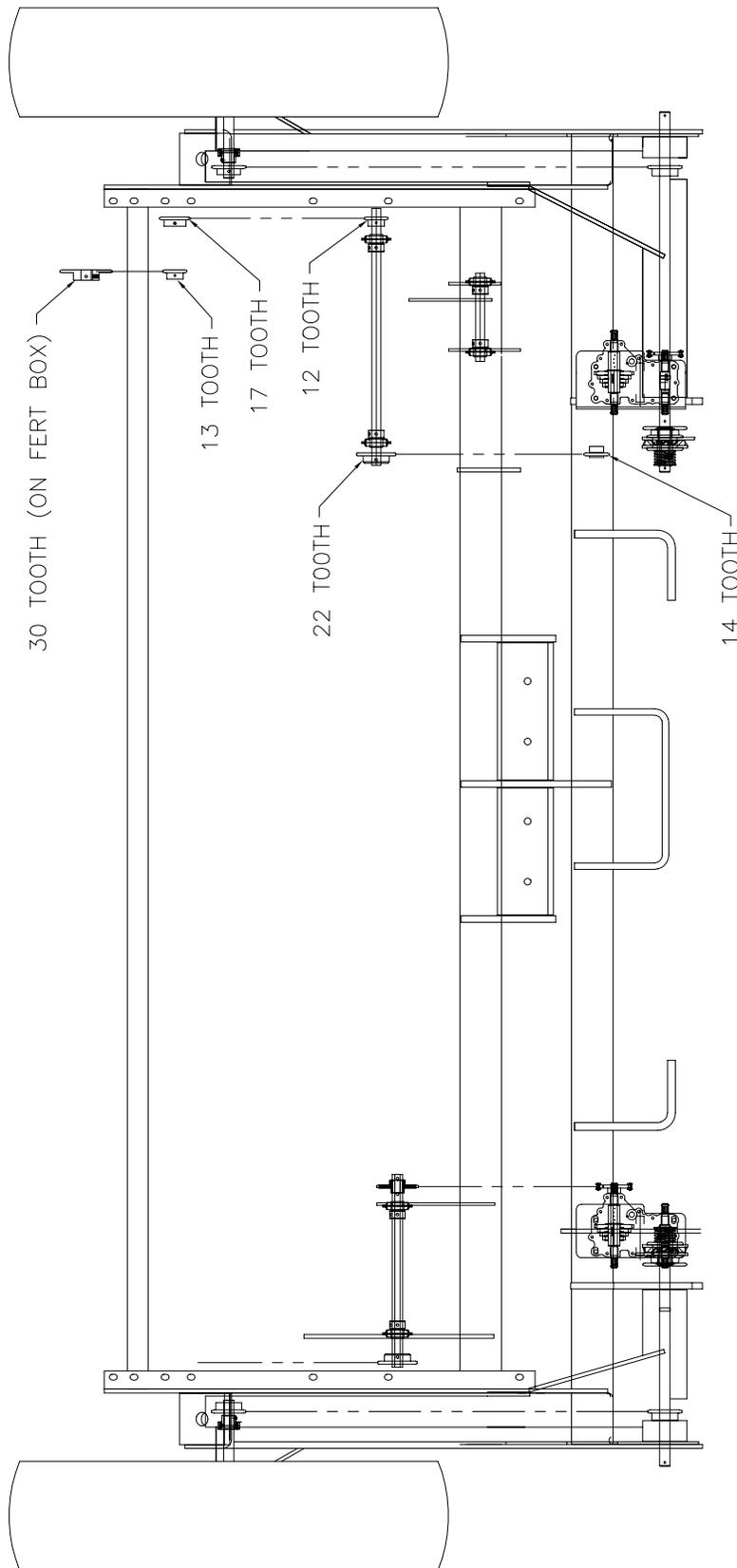
21755

# Native Grass Sprocket Configuration



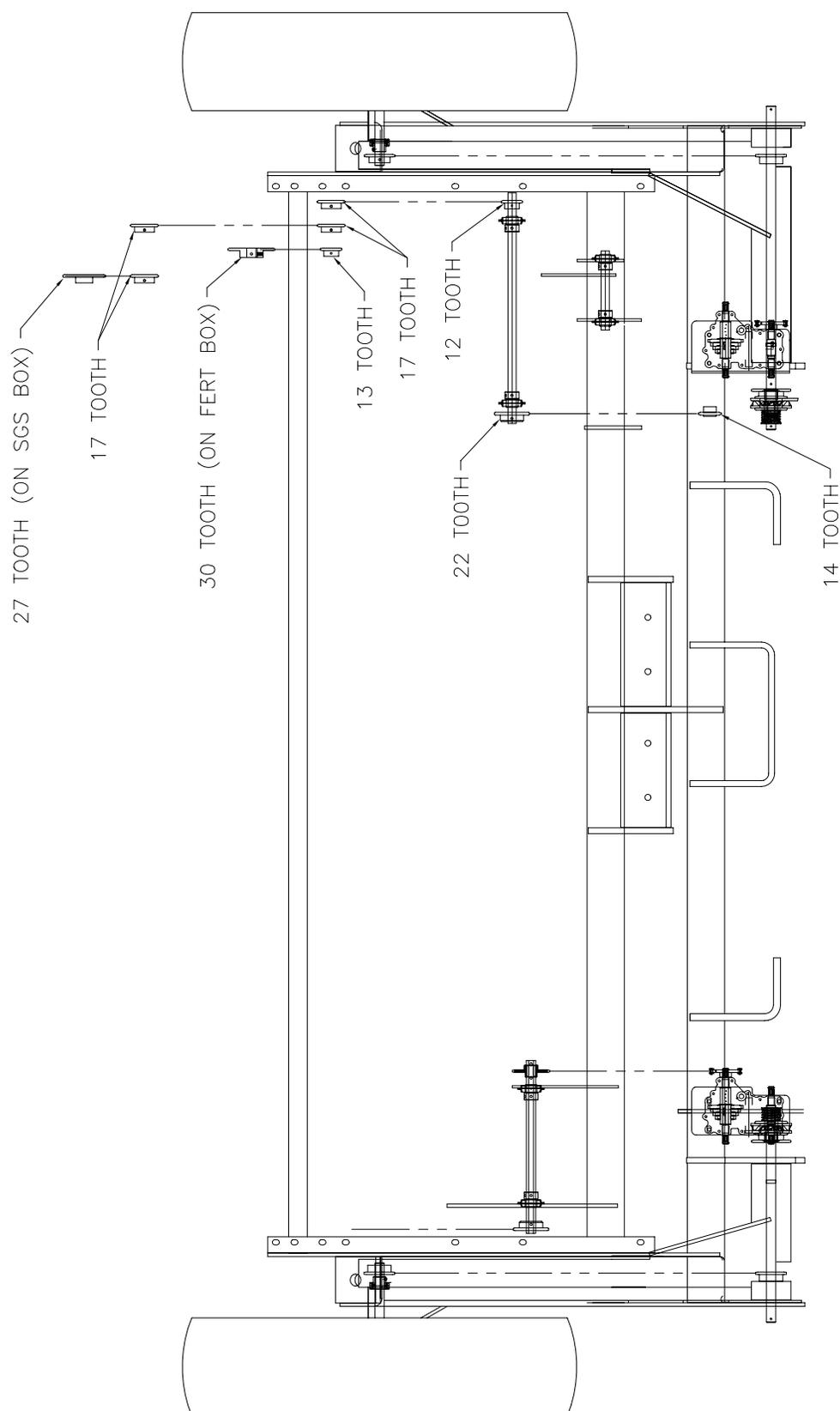
21756

## Fertilizer Sprocket Configuration



21757

## Fertilizer with Small Grass Seeds Box Sprocket Configuration



21758

## Warranty

Great Plains Manufacturing, Incorporated warrants to the original purchaser that this seeding equipment will be free from defects in material and workmanship for a period of one year from the date of original purchase when used as intended and under normal service and conditions for personal use; 90 days for commercial or rental purposes. This Warranty is limited to the replacement of any defective part by Great Plains Manufacturing, Incorporated and the installation by the dealer of any such replacement part. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Great Plains' judgement shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. This Warranty shall not apply if the product is towed at a speed in excess of 20 miles per hour.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Great Plains reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Great Plains liable for damages of any kind, direct, consequential, or contingent, to property. Furthermore, Great Plains shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, losses caused by harvest delays or any expense or loss for labor, supplies, rental machinery or for any other reason.

**No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.**

This Warranty is not valid unless registered with Great Plains Manufacturing, Incorporated within 10 days from the date of original purchase.

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**Great Plains Manufacturing, Inc.**  
Corporate Office: P.O. Box 5060  
Salina, Kansas 67402-5060 USA

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